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Astronomisches Jahrbuch

für

1933

158. Jahrgang

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Astronomischen Rechen-Institut



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Astronomisches Rechen-Institut

Berlin-Dahlem, Altenstein Str. 40

Direktor:	Dr. A. Kopff, Universitätsprofessor
Observatoren:	Dr. J. Peters, Professor
	Dr. J. Riem, Professor
	Dr. P. V. Neugebauer, Professor
	Dr. G. Stracke, Professor
	Dr. O. Kohl
Assistenten:	Dr. A. Kahrstedt
	Dr. K. Heinemann
	Dr. F. Gondolatsch
Hilfsrechner:	R. Hiller
Mitarbeiter:	Dr. E. Hopf, Privatdozent
	H. Nowacki
	K. Pilowski

Vorwort

Vom Jahrgang 1916 an ist der fundamentale Meridian, auf den alle Angaben des Jahrbuchs bezogen sind, der Meridian von Greenwich.

Die Zeit ist vom Jahrgang 1925 an in Welt-Zeit, d. i. Bürgerliche Zeit Greenwich, ausgedrückt (siehe Erläuterungen).

Die Grundlagen des Berliner Astronomischen Jahrbuchs bilden:

Für die Sonne und die großen Planeten:

Die Tafeln von Newcomb und (für Jupiter und Saturn) von Hill, enthalten in:

Astronomical Papers of the American Ephemeris,
Vol. VI, Part I—IV: *Tables of the four inner planets*,
Vol. VII, Part I—IV: *Tables of Jupiter, Saturn, Uranus, Neptune.*

Als Sonnenhalbmesser in der mittleren Entfernung ist 16′ 1″.50 angenommen; dagegen liegt der Berechnung der Finsternisse der von Auwers in A. N., Bd. 128 gegebene Wert 15′ 59″.63 zugrunde.

Für den Mond:

Tables of the Motion of the Moon by Ernest W. Brown.

Der geozentrische Mondhalbmesser $r_☾$ ist aus der Äquatorial-Horizontalparallaxe $p_☾$ gerechnet nach der Formel

$$r_☾ = 0.272469\, p_☾ + 1''.50,$$

für die Finsternisse nach $\sin r_☾ = 0.272274 \sin p_☾$.

Als Neigung des Mondäquators gegen die Ekliptik ist nach F. Hayn (A. N. Bd. 199, 263) angenommen: $J = 1^\circ\, 32'\, 20''$.

Für die Fixsterne:

Neuer Fundamentalkatalog des Berliner Astronomischen Jahrbuchs nach den Grundlagen von A. Auwers, für die Epochen 1875 und 1900 bearbeitet von Dr. J. Peters (Veröffentlichung Nr. 33 des Königlichen Astronomischen Rechen-Instituts).

Die Sterngrößen sind der »Revised Harvard Photometry (Harvard Annals, vol. 50)«, die Sternspektra dem »Henry Draper Catalogue (Harvard Annals, vol. 91—99)« entnommen.

Als Werte der fundamentalen Reduktionsgrößen sind angenommen:

Die Präzessions-Größen nach S. Newcomb (vgl. H. Andoyer, Bull. Astr. **28**, 67)
Die Nutations-Konstante . . . . . 9″.21
Die Nutations-Größen nach S. Newcomb (Bull. Astr. **15**, 241)
Die Aberrations-Konstante . . . . 20″.47
Die Sonnen-Parallaxe . . . . 8″.80
Die Abplattung der Erde . . . . 1 : 297.0

Für die Satelliten:

Die Angaben über die 4 älteren Jupitertrabanten beruhen auf den neuen Tafeln von R. A. Sampson (*Tables of the four great Satellites of Jupiter.* London 1910), die Angaben über die 8 älteren Saturnsatelliten auf den von H. Struve ermittelten Werten (Näheres s. Erläuterungen).

In allen Ephemeriden der Sonne, der Planeten und der Fixsterne sind die kurzperiodischen, von der Mondlänge abhängigen Nutationsglieder weggelassen; doch bietet das Jahrbuch die Möglichkeit, auch diese weggelassenen Glieder zu berücksichtigen (s. Erläuterungen).

Der Inhalt des Jahrbuches hat gegen das Vorjahr nur geringe Änderungen erfahren. Die rechtwinkligen Sonnenkoordinaten werden vom vorliegenden Jahrgang ab getrennt für das Jahresäquinoktium und das Normaläquinoktium im Tagesintervall und auf 6 Dezimalen gegeben, jedoch kann die 7. Dezimale leicht gefunden werden (Näheres s. Erläuterungen). Die Tafel zur Ermittelung des Datums in der Julianischen Periode wurde bis zum Jahre 1979 fortgesetzt. Neu aufgenommen wurden eine Tafel zur Verwandlung von Minuten und Sekunden in Dezimalteile des Grades sowie Tafeln zur gegenseitigen Verwandlung von mittlerer Zeit in Sternzeit, welche die erforderlichen Reduktionen auf ein Tausendstel der Sekunde zu entnehmen gestatten.

Bezüglich der Zahlengrundlagen sei auf die im Berliner Jahrbuch für 1916 gegebene Darstellung der »Grundbegriffe der Sphärischen Astronomie« hingewiesen.

Ein Teil der Angaben wurde seitens der American Ephemeris and Nautical Almanac, Washington, des Nautical Almanac Office, London, und des Bureau des Longitudes, Paris, zur Verfügung gestellt. Die Ephemeride des Kraters Mösting A. ist von dem Institut Astronomique in Leningrad berechnet worden.

Die Schriftleitung des Astronomischen Jahrbuchs für 1933 lag in den Händen von Herrn Kohl; an den verschiedenen Arbeiten beteiligten sich außerdem die Herren Heinemann und Gondolatsch sowie mehrere Hilfsarbeiter.

Astronomisches Rechen-Institut.

Inhalt

Zeit- und Festrechnung 1933

Das Jahr 1933 entspricht dem
Jahr 6646 der Julianischen Periode und dem
Jahr 7441—7442 der Byzantinischen Ära.

Gregorianischer Kalender

Goldene Zahl	15
Epakte	III
Sonnenzirkel	10
Sonntagsbuchstabe	A

Septuagesima	12. Febr.
Aschermittwoch	1. März
I. Quatember	8. März
Ostersonntag	16. April
Himmelfahrt	25. Mai
Pfingstsonntag	4. Juni
II. Quatember	7. Juni
III. Quatember	20. Sept.
I. Advent	3. Dez.
IV. Quatember	20. Dez.

Kalender der Mohammedaner

1351 (Gemeinjahr von 354 Tagen)

Schewwâl	1	1933	Jan.	28
Dsû'l-kade	1	»	Febr.	26
Dsû'l-hedsche	1	»	März	28

1352 (Schaltjahr von 355 Tagen)

Moharrem	1	1933	April	26
Safar	1	»	Mai	26
Rebî-el-awwel	1	»	Juni	24
Rebî-el-accher	1	»	Juli	24
Dschemâdi-el-awwel	1	»	Aug.	22
Dschemâdi-el-accher	1	»	Sept.	21
Redscheb	1	»	Okt.	20
Schabân	1	»	Nov.	19
Ramadân	1	»	Dez.	18

Kalender der Juden

5693 (Gemeinjahr von 355 Tagen)

Tebet	10	Fasten. Belagerung Jerusalems	1933	Jan.	8
Schebat	1	. . . .	»	»	28
Adar	1	. . . .	»	Febr.	27
»	11	Fasten-Esther	»	März	9
»	14	Purim	»	»	12
»	15	Schuschan-Purim	»	»	13
Nisan	1	. . . .	»	»	28
»	15	*Passah-Anfang	»	April	11
»	16	*Zweites Fest	»	»	12
»	21	*Siebentes Fest	»	»	17
»	22	*Achtes Fest	»	»	18
Ijar	1	. . . .	»	»	27
»	18	Lag-B'omer	»	Mai	14
Sivan	1	. . . .	»	»	26
»	6	*Wochenfest	»	»	31
»	7	*Zweites Fest	»	Juni	1
Thamuz	1	. . . .	»	»	25
»	17	Fasten. Eroberung Jerusalems .	»	Juli	11
Ab	1	. . . .	»	»	24
»	9	Fasten. Tempelverbrennung .	»	Aug.	1
Elul	1	. . . .	»	»	23

5694 (Gemeinjahr von 354 Tagen)

Tischri	1	*Neujahrsfest	1933	Sept.	21
»	2	*Zweites Fest	»	»	22
»	4	Fasten-Gedaljah	»	»	24
»	10	*Versöhnungsfest	»	»	30
»	15	*Laubhüttenfest	»	Okt.	5
»	16	*Zweites Fest	»	»	6
»	21	Palmenfest	»	»	11
»	22	*Laubhüttenende	»	»	12
»	23	*Gesetzesfreude	»	»	13
Marcheschwan	1	. . . .	»	»	21
Kislev	1	. . . .	»	Nov.	19
»	25	Tempelweihe	»	Dez.	13
Tebet	1	. . . .	»	»	19
»	10	Fasten. Belagerung Jerusalems	»	»	28

Die mit * bezeichneten Festtage werden streng gefeiert.

Astronomische Zeichen und Abkürzungen

Bezeichnung der Wochentage

☉	Sonntag
☾	Montag
♂	Dienstag
☿	Mittwoch
♃	Donnerstag
♀	Freitag
♄	Sonnabend

Adspekten

☌	Konjunktion
□	Quadratur
☍	Opposition

Mondphasen

●	Neumond
☽	Erstes Viertel
○	Vollmond
☾	Letztes Viertel

☊ Aufsteigender } Knoten
☋ Absteigender }

Zeichen

des Tierkreises und der Himmelskörper

♈	Widder . . .	0	Grad
♉	Stier	30	»
♊	Zwillinge . . .	60	»
♋	Krebs	90	»
♌	Löwe	120	»
♍	Jungfrau . . .	150	»
♎	Waage . . .	180	»
♏	Skorpion . . .	210	»
♐	Schütze . . .	240	»
♑	Steinbock . .	270	»
♒	Wassermann .	300	»
♓	Fische	330	»

☉	Sonne
☾	Mond
☿	Merkur
♀	Venus
♁	Erde
♂	Mars
♃	Jupiter
♄	Saturn
♅	Uranus
♆	Neptun

Sonne, Mond, Große Planeten

1933

Tag	Wochentag	0h Welt-Zeit							
		Zeitgleichung Mittlere Zeit *minus* Wahre Zeit		Scheinbare Rektaszension		Scheinbare Deklination		Halbe Durchgangs-Dauer St.-Zt.	Halbmesser
1933		m s	s	h m s	m s	° ′ ″	′ ″	s	′ ″
Jan. 0	Sa	+ 2 52.81	28.77	18 39 42.50	4 25.33	−23 8 11.2	4 25.8	71.10	16 17.82
1	St	3 21.58	28.45	18 44 7.83	4 25.01	23 3 45.4	4 53.5	71.06	16 17.84
2	Mo	3 50.03	28.10	18 48 32.84	4 24.66	22 58 51.9	5 20.9	71.02	16 17.85
3	Di	4 18.13	27.71	18 52 57.50	4 24.27	22 53 31.0	5 48.2	70.98	16 17.85
4	Mi	4 45.84	27.30	18 57 21.77	4 23.86	22 47 42.8	6 15.3	70.93	16 17.86
5	Do	5 13.14	26.86	19 1 45.63	4 23.42	22 41 27.5	6 42.3	70.87	16 17.85
6	Fr	+ 5 40.00	26.40	19 6 9.05	4 22.95	−22 34 45.2	7 9.0	70.81	16 17.84
7	Sa	6 6.40	25.90	19 10 32.00	4 22.46	22 27 36.2	7 35.5	70.75	16 17.83
8	St	6 32.30	25.38	19 14 54.46	4 21.94	22 20 0.7	8 1.7	70.69	16 17.81
9	Mo	6 57.68	24.85	19 19 16.40	4 21.40	22 11 59.0	8 27.8	70.61	16 17.78
10	Di	7 22.53	24.28	19 23 37.80	4 20.85	22 3 31.2	8 53.7	70.54	16 17.75
11	Mi	7 46.81	23.70	19 27 58.65	4 20.26	21 54 37.5	9 19.1	70.46	16 17.71
12	Do	+ 8 10.51	23.10	19 32 18.91	4 19.66	−21 45 18.4	9 44.5	70.38	16 17.67
13	Fr	8 33.61	22.49	19 36 38.57	4 19.04	21 35 33.9	10 9.6	70.29	16 17.61
14	Sa	8 56.10	21.85	19 40 57.61	4 18.41	21 25 24.3	10 34.2	70.21	16 17.56
15	St	9 17.95	21.20	19 45 16.02	4 17.76	21 14 50.1	10 58.8	70.12	16 17.49
16	Mo	9 39.15	20.53	19 49 33.78	4 17.09	21 3 51.3	11 23.0	70.03	16 17.42
17	Di	9 59.68	19.86	19 53 50.87	4 16.41	20 52 28.3	11 46.8	69.93	16 17.35
18	Mi	+10 19.54	19.16	19 58 7.28	4 15.73	−20 40 41.5	12 10.5	69.84	16 17.27
19	Do	10 38.70	18.46	20 2 23.01	4 15.01	20 28 31.0	12 33.7	69.74	16 17.18
20	Fr	10 57.16	17.73	20 6 38.02	4 14.29	20 15 57.3	12 56.7	69.64	16 17.09
21	Sa	11 14.89	17.00	20 10 52.31	4 13.56	20 3 0.6	13 19.2	69.54	16 16.99
22	St	11 31.89	16.25	20 15 5.87	4 12.80	19 49 41.4	13 41.5	69.43	16 16.89
23	Mo	11 48.14	15.48	20 19 18.67	4 12.05	19 35 59.9	14 3.4	69.33	16 16.79
24	Di	+12 3.62	14.71	20 23 30.72	4 11.26	−19 21 56.5	14 24.9	69.22	16 16.68
25	Mi	12 18.33	13.92	20 27 41.98	4 10.47	19 7 31.6	14 46.0	69.11	16 16.57
26	Do	12 32.25	13.11	20 31 52.45	4 9.67	18 52 45.6	15 6.6	69.00	16 16.45
27	Fr	12 45.36	12.30	20 36 2.12	4 8.86	18 37 39.0	15 26.9	68.88	16 16.34
28	Sa	12 57.66	11.48	20 40 10.98	4 8.04	18 22 12.1	15 46.8	68.77	16 16.22
29	St	13 9.14	10.65	20 44 19.02	4 7.20	18 6 25.3	16 6.3	68.66	16 16.09
30	Mo	+13 19.79	9.81	20 48 26.22	4 6.37	−17 50 19.0	16 25.3	68.55	16 15.97
31	Di	13 29.60	8.98	20 52 32.59	4 5.54	17 33 53.7	16 43.9	68.43	16 15.84
Febr. 1	Mi	13 38.58	8.14	20 56 38.13	4 4.69	17 17 9.8	17 2.1	68.32	16 15.70
2	Do	13 46.72	7.30	21 0 42.82	4 3.86	17 0 7.7	17 19.9	68.20	16 15.56
3	Fr	13 54.02	6.47	21 4 46.68	4 3.03	16 42 47.8	17 37.3	68.08	16 15.42
4	Sa	14 0.49	5.64	21 8 49.71	4 2.19	16 25 10.5	17 54.2	67.97	16 15.27
5	St	+14 6.13	4.81	21 12 51.90	4 1.37	−16 7 16.3	18 10.8	67.85	16 15.12
6	Mo	14 10.94	3.98	21 16 53.27	4 0.54	15 49 5.5	18 27.0	67.74	16 14.96
7	Di	14 14.92	3.17	21 20 53.81	3 59.73	15 30 38.5	18 42.7	67.63	16 14.80
8	Mi	14 18.09	2.37	21 24 53.54	3 58.92	15 11 55.8	18 58.0	67.51	16 14.64
9	Do	14 20.46	1.57	21 28 52.46	3 58.13	14 52 57.8	19 13.0	67.40	16 14.47
10	Fr	+14 22.03		21 32 50.59		−14 33 44.8		67.29	16 14.29

Tag	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	Nutation in AR. kurzp. Gl.	Mittleres Äquinoktium 1933.0 Länge		Breite	log R		Aufgang in +50° Breite, 0h Länge	Untergang in +50° Breite, 0h Länge
1933	2427	h m s	s in 0.001		° ′ ″	′ ″	″ in 0.01			h m	h m
Jan. 0	072.5	6 36 49.691	+360	+18	279 7 32.6	61 10.3	−38	9.992 6895	69	7 59	16 8
1	073.5	6 40 46.250	364	+15	280 8 42.9	61 10.1	−25	9.992 6826	49	7 59	16 8
2	074.5	6 44 42.809	368	+ 9	281 9 53.0	61 9.8	−12	9.992 6777	28	7 59	16 9
3	075.5	6 48 39.368	371	+ 2	282 11 2.8	61 9.6	+ 1	9.992 6749	7	7 59	16 10
4	076.5	6 52 35.927	375	− 4	283 12 12.4	61 9.2	+13	9.992 6742	−17	7 58	16 12
5	077.5	6 56 32.486	379	− 9	284 13 21.6	61 8.8	+23	9.992 6759	40	7 58	16 13
6	078.5	7 0 29.045	+382	−12	285 14 30.4	61 8.5	+31	9.992 6799	66	7 58	16 14
7	079.5	7 4 25.604	386	−12	286 15 38.9	61 8.1	+36	9.992 6865	91	7 58	16 15
8	080.5	7 8 22.162	389	−10	287 16 47.0	61 7.7	+39	9.992 6956	118	7 57	16 16
9	081.5	7 12 18.721	392	− 7	288 17 54.7	61 7.4	+38	9.992 7074	144	7 57	16 18
10	082.5	7 16 15.280	395	− 2	289 19 2.1	61 6.9	+35	9.992 7218	173	7 56	16 19
11	083.5	7 20 11.838	398	+ 4	290 20 9.0	61 6.6	+30	9.992 7391	200	7 56	16 20
12	084.5	7 24 8.397	+401	+ 8	291 21 15.6	61 6.2	+22	9.992 7591	228	7 55	16 22
13	085.5	7 28 4.955	405	+10	292 22 21.8	61 5.9	+12	9.992 7819	256	7 55	16 23
14	086.5	7 32 1.513	408	+10	293 23 27.7	61 5.6	+ 1	9.992 8075	284	7 54	16 25
15	087.5	7 35 58.072	411	+ 8	294 24 33.3	61 5.3	−11	9.992 8359	311	7 54	16 26
16	088.5	7 39 54.630	414	+ 3	295 25 38.6	61 5.0	−23	9.992 8670	336	7 53	16 28
17	089.5	7 43 51.188	416	− 4	296 26 43.6	61 4.7	−36	9.992 9006	361	7 52	16 29
18	090.5	7 47 47.746	+419	−10	297 27 48.3	61 4.5	−49	9.992 9367	385	7 51	16 31
19	091.5	7 51 44.304	422	−15	298 28 52.8	61 4.1	−59	9.992 9752	407	7 50	16 32
20	092.5	7 55 40.862	424	−17	299 29 56.9	61 3.8	−66	9.993 0159	427	7 49	16 34
21	093.5	7 59 37.420	427	−15	300 31 0.7	61 3.4	−71	9.993 0586	445	7 48	16 35
22	094.5	8 3 33.977	429	−10	301 32 4.1	61 3.0	−72	9.993 1031	463	7 47	16 37
23	095.5	8 7 30.535	431	− 2	302 33 7.1	61 2.4	−69	9.993 1494	479	7 46	16 38
24	096.5	8 11 27.092	+433	+ 6	303 34 9.5	61 1.7	−64	9.993 1973	494	7 45	16 40
25	097.5	8 15 23.650	435	+13	304 35 11.2	61 1.0	−55	9.993 2467	508	7 44	16 41
26	098.5	8 19 20.207	437	+17	305 36 12.2	61 0.1	−45	9.993 2975	522	7 43	16 43
27	099.5	8 23 16.764	439	+18	306 37 12.3	60 59.2	−32	9.993 3497	535	7 42	16 45
28	100.5	8 27 13.322	441	+15	307 38 11.5	60 58.1	−18	9.993 4032	551	7 40	16 47
29	101.5	8 31 9.879	442	+10	308 39 9.6	60 56.9	− 5	9.993 4583	565	7 39	16 48
30	102.5	8 35 6.435	+444	+ 4	309 40 6.5	60 55.7	+ 9	9.993 5148	582	7 37	16 50
31	103.5	8 39 2.992	446	− 2	310 41 2.2	60 54.4	+21	9.993 5730	599	7 36	16 52
Febr. 1	104.5	8 42 59.549	447	− 8	311 41 56.6	60 53.1	+31	9.993 6329	617	7 35	16 54
2	105.5	8 46 56.106	449	−11	312 42 49.7	60 51.7	+40	9.993 6946	635	7 33	16 55
3	106.5	8 50 52.662	450	−12	313 43 41.4	60 50.4	+46	9.993 7581	654	7 32	16 57
4	107.5	8 54 49.219	451	−11	314 44 31.8	60 48.9	+49	9.993 8235	675	7 30	16 58
5	108.5	8 58 45.775	+452	− 8	315 45 20.7	60 47.5	+50	9.993 8910	696	7 29	17 0
6	109.5	9 2 42.331	452	− 3	316 46 8.2	60 46.0	+47	9.993 9606	717	7 27	17 2
7	110.5	9 6 38.888	453	+ 2	317 46 54.2	60 44.7	+42	9.994 0323	740	7 26	17 4
8	111.5	9 10 35.444	454	+ 7	318 47 38.9	60 43.2	+35	9.994 1063	762	7 24	17 5
9	112.5	9 14 32.000	455	+10	319 48 22.1	60 41.8	+25	9.994 1825	785	7 23	17 7
10	113.5	9 18 28.555	+455	+11	320 49 3.9		+13	9.994 2610		7 21	17 9

Sonne 1933

Tag	Wochentag	0h Welt-Zeit: Zeitgleichung Mittlere Zeit *minus* Wahre Zeit		Scheinbare Rektaszension		Scheinbare Deklination		Halbe Durchgangs-Dauer St.-Zt.	Halbmesser
1933		m s	s	h m s	m s	° ′ ″	′ ″	s	′ ″
Febr. 10	Fr	+14 22.03	0.79	21 32 50.59	3 57.34	−14 33 44.8	19 27.6	67.29	16 14.29
11	Sa	14 22.82	0.01	21 36 47.93	3 56.57	14 14 17.2	19 41.7	67.18	16 14.11
12	St	14 22.83	0.74	21 40 44.50	3 55.81	13 54 35.5	19 55.5	67.07	16 13.92
13	Mo	14 22.09	1.49	21 44 40.31	3 55.07	13 34 40.0	20 8.9	66.96	16 13.73
14	Di	14 20.60	2.22	21 48 35.38	3 54.33	13 14 31.1	20 21.9	66.85	16 13.53
15	Mi	14 18.38	2.94	21 52 29.71	3 53.62	12 54 9.2	20 34.5	66.75	16 13.33
16	Do	+14 15.44	3.64	21 56 23.33	3 52.92	−12 33 34.7	20 46.7	66.64	16 13.13
17	Fr	14 11.80	4.33	22 0 16.25	3 52.22	12 12 48.0	20 58.5	66.54	16 12.92
18	Sa	14 7.47	5.00	22 4 8.47	3 51.55	11 51 49.5	21 9.9	66.44	16 12.71
19	St	14 2.47	5.67	22 8 0.02	3 50.88	11 30 39.6	21 20.9	66.34	16 12.49
20	Mo	13 56.80	6.33	22 11 50.90	3 50.24	11 9 18.7	21 31.5	66.24	16 12.27
21	Di	13 50.47	6.96	22 15 41.14	3 49.59	10 47 47.2	21 41.6	66.14	16 12.05
22	Mi	+13 43.51	7.59	22 19 30.73	3 48.96	−10 26 5.6	21 51.3	66.05	16 11.83
23	Do	13 35.92	8.21	22 23 19.69	3 48.34	10 4 14.3	22 0.6	65.96	16 11.60
24	Fr	13 27.71	8.82	22 27 8.03	3 47.74	9 42 13.7	22 9.4	65.87	16 11.38
25	Sa	13 18.89	9.41	22 30 55.77	3 47.15	9 20 4.3	22 17.7	65.78	16 11.15
26	St	13 9.48	9.98	22 34 42.92	3 46.57	8 57 46.6	22 25.8	65.70	16 10.92
27	Mo	12 59.50	10.55	22 38 29.49	3 46.00	8 35 20.8	22 33.2	65.61	16 10.69
28	Di	+12 48.95	11.11	22 42 15.49	3 45.45	− 8 12 47.6	22 40.4	65.53	16 10.45
März 1	Mi	12 37.84	11.63	22 46 0.94	3 44.92	7 50 7.2	22 47.1	65.46	16 10.22
2	Do	12 26.21	12.16	22 49 45.86	3 44.40	7 27 20.1	22 53.3	65.39	16 9.98
3	Fr	12 14.05	12.65	22 53 30.26	3 43.90	7 4 26.8	22 59.2	65.32	16 9.75
4	Sa	12 1.40	13.13	22 57 14.16	3 43.42	6 41 27.6	23 4.8	65.25	16 9.51
5	St	11 48.27	13.59	23 0 57.58	3 42.96	6 18 22.8	23 9.8	65.18	16 9.26
6	Mo	+11 34.68	14.04	23 4 40.54	3 42.52	− 5 55 13.0	23 14.5	65.11	16 9.02
7	Di	11 20.64	14.46	23 8 23.06	3 42.09	5 31 58.5	23 18.8	65.05	16 8.77
8	Mi	11 6.18	14.86	23 12 5.15	3 41.70	5 8 39.7	23 22.8	64.99	16 8.52
9	Do	10 51.32	15.24	23 15 46.85	3 41.31	4 45 16.9	23 26.4	64.94	16 8.27
10	Fr	10 36.08	15.60	23 19 28.16	3 40.96	4 21 50.5	23 29.6	64.88	16 8.02
11	Sa	10 20.48	15.93	23 23 9.12	3 40.62	3 58 20.9	23 32.5	64.83	16 7.76
12	St	+10 4.55	16.24	23 26 49.74	3 40.31	− 3 34 48.4	23 35.1	64.78	16 7.50
13	Mo	9 48.31	16.53	23 30 30.05	3 40.03	3 11 13.3	23 37.2	64.74	16 7.23
14	Di	9 31.78	16.78	23 34 10.08	3 39.77	2 47 36.1	23 39.2	64.70	16 6.97
15	Mi	9 15.00	17.02	23 37 49.85	3 39.53	2 23 56.9	23 40.6	64.66	16 6.70
16	Do	8 57.98	17.24	23 41 29.38	3 39.32	2 0 16.3	23 41.8	64.62	16 6.43
17	Fr	8 40.74	17.42	23 45 8.70	3 39.13	1 36 34.5	23 42.6	64.59	16 6.15
18	Sa	+ 8 23.32	17.60	23 48 47.83	3 38.96	− 1 12 51.9	23 43.1	64.56	16 5.88
19	St	8 5.72	17.74	23 52 26.79	3 38.81	0 49 8.8	23 43.2	64.54	16 5.60
20	Mo	7 47.98	17.87	23 56 5.60	3 38.69	0 25 25.6	23 43.0	64.52	16 5.32
21	Di	7 30.11	17.97	23 59 44.29	3 38.57	− 0 1 42.6	23 42.3	64.50	16 5.04
22	Mi	7 12.14	18.07	0 3 22.86	3 38.49	+ 0 21 59.7	23 41.2	64.48	16 4.76
23	Do	+ 6 54.07		0 7 1.35		+ 0 45 40.9		64.47	16 4.48

Sonne 1933

Tag	0ʰ Welt-Zeit									Aufgang	Untergang
	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	Nutation in AR. kurzp. Gl.	Mittleres Äquinoktium 1933.0 Länge		Breite	log R		in {+50° Breite, 0ʰ Länge}	
1933	2427	h m s	s in 0.001		° ′ ″	′ ″	″ in 0.01			h m	h m
Febr. 10	113.5	9 18 28.555	+455	+11	320 49 3.9	60 40.4	+13	9.994 2610	808	7 21	17 9
11	114.5	9 22 25.111	455	+ 9	321 49 44.3	60 39.1	0	9.994 3418	832	7 19	17 11
12	115.5	9 26 21.667	456	+ 6	322 50 23.4	60 37.8	−14	9.994 4250	854	7 17	17 13
13	116.5	9 30 18.222	456	− 1	323 51 1.2	60 36.5	−27	9.994 5104	876	7 16	17 14
14	117.5	9 34 14.778	456	− 7	324 51 37.7	60 35.3	−39	9.994 5980	897	7 14	17 16
15	118.5	9 38 11.333	456	−13	325 52 13.0	60 34.0	−49	9.994 6877	916	7 12	17 18
16	119.5	9 42 7.889	+456	−16	326 52 47.0	60 32.9	−57	9.994 7793	934	7 10	17 20
17	120.5	9 46 4.444	456	−15	327 53 19.9	60 31.7	−62	9.994 8727	950	7 8	17 21
18	121.5	9 50 0.999	456	−12	328 53 51.6	60 30.4	−64	9.994 9677	965	7 7	17 23
19	122.5	9 53 57.554	455	− 4	329 54 22.0	60 29.1	−63	9.995 0642	977	7 5	17 24
20	123.5	9 57 54.109	455	+ 4	330 54 51.1	60 27.8	−58	9.995 1619	988	7 3	17 26
21	124.5	10 1 50.664	455	+11	331 55 18.9	60 26.5	−50	9.995 2607	997	7 1	17 28
22	125.5	10 5 47.219	+454	+16	332 55 45.4	60 24.9	−40	9.995 3604	1006	6 59	17 30
23	126.5	10 9 43.773	453	+18	333 56 10.3	60 23.4	−29	9.995 4610	1013	6 57	17 31
24	127.5	10 13 40.328	452	+16	334 56 33.7	60 21.7	−15	9.995 5623	1021	6 55	17 33
25	128.5	10 17 36.882	452	+12	335 56 55.4	60 20.0	− 1	9.995 6644	1026	6 53	17 35
26	129.5	10 21 33.437	451	+ 6	336 57 15.4	60 18.1	+13	9.995 7670	1033	6 51	17 37
27	130.5	10 25 29.991	450	− 1	337 57 33.5	60 16.3	+26	9.995 8703	1041	6 49	17 38
28	131.5	10 29 26.546	+449	− 7	338 57 49.8	60 14.3	+37	9.995 9744	1048	6 47	17 40
März 1	132.5	10 33 23.100	448	−10	339 58 4.1	60 12.3	+46	9.996 0792	1056	6 45	17 41
2	133.5	10 37 19.654	447	−12	340 58 16.4	60 10.3	+53	9.996 1848	1065	6 43	17 43
3	134.5	10 41 16.208	446	−12	341 58 26.7	60 8.2	+57	9.996 2913	1074	6 41	17 45
4	135.5	10 45 12.762	444	− 9	342 58 34.9	60 6.1	+59	9.996 3987	1084	6 39	17 46
5	136.5	10 49 9.316	442	− 5	343 58 41.0	60 4.0	+58	9.996 5071	1094	6 36	17 48
6	137.5	10 53 5.870	+441	0	344 58 45.0	60 1.8	+54	9.996 6165	1106	6 34	17 49
7	138.5	10 57 2.424	440	+ 5	345 58 46.8	59 59.8	+47	9.996 7271	1117	6 32	17 51
8	139.5	11 0 58.978	438	+ 9	346 58 46.6	59 57.6	+38	9.996 8388	1130	6 30	17 53
9	140.5	11 4 55.532	437	+10	347 58 44.2	59 55.5	+26	9.996 9518	1143	6 28	17 54
10	141.5	11 8 52.086	435	+10	348 58 39.7	59 53.5	+14	9.997 0661	1157	6 26	17 56
11	142.5	11 12 48.640	434	+ 7	349 58 33.2	59 51.4	+ 1	9.997 1818	1171	6 24	17 57
12	143.5	11 16 45.194	+432	+ 1	350 58 24.6	59 49.5	−13	9.997 2989	1185	6 22	17 59
13	144.5	11 20 41.747	431	− 5	351 58 14.1	59 47.6	−26	9.997 4174	1198	6 20	18 1
14	145.5	11 24 38.301	429	−11	352 58 1.7	59 45.8	−36	9.997 5372	1211	6 18	18 2
15	146.5	11 28 34.855	427	−15	353 57 47.5	59 44.0	−45	9.997 6583	1223	6 15	18 4
16	147.5	11 32 31.408	425	−15	354 57 31.5	59 42.3	−52	9.997 7806	1232	6 13	18 5
17	148.5	11 36 27.962	424	−12	355 57 13.8	59 40.5	−55	9.997 9038	1241	6 11	18 7
18	149.5	11 40 24.515	+422	− 6	356 56 54.3	59 38.9	−56	9.998 0279	1248	6 9	18 9
19	150.5	11 44 21.069	420	+ 2	357 56 33.2	59 37.2	−52	9.998 1527	1252	6 7	18 10
20	151.5	11 48 17.623	419	+ 9	358 56 10.4	59 35.4	−45	9.998 2779	1255	6 4	18 12
21	152.5	11 52 14.176	417	+15	359 55 45.8	59 33.7	−36	9.998 4034	1256	6 2	18 13
22	153.5	11 56 10.730	415	+18	0 55 19.5	59 31.9	−25	9.998 5290	1257	6 0	18 15
23	154.5	12 0 7.283	+413	+17	1 54 51.4		−11	9.998 6547		5 58	18 17

Tag	Wochentag	0ʰ Welt-Zeit: Zeitgleichung (Mittlere Zeit *minus* Wahre Zeit)		Scheinbare Rektaszension		Scheinbare Deklination		Halbe Durchgangs-Dauer St.-Zt.	Halbmesser
1933		m s	s	h m s	m s	° ′ ″	′ ″	s	′ ″
März 23	Do	+6 54.07	18.15	0 7 1.35	3 38.41	+0 45 40.9	23 39.8	64.47	16 4.48
24	Fr	6 35.92	18.20	0 10 39.76	3 38.35	1 9 20.7	23 38.1	64.46	16 4.20
25	Sa	6 17.72	18.24	0 14 18.11	3 38.32	1 32 58.8	23 35.8	64.45	16 3.93
26	St	5 59.48	18.26	0 17 56.43	3 38.29	1 56 34.6	23 33.2	64.44	16 3.65
27	Mo	5 41.22	18.27	0 21 34.72	3 38.28	2 20 7.8	23 30.3	64.44	16 3.37
28	Di	5 22.95	18.25	0 25 13.00	3 38.30	2 43 38.1	23 26.9	64.44	16 3.10
29	Mi	+5 4.70	18.23	0 28 51.30	3 38.33	+3 7 5.0	23 23.2	64.44	16 2.82
30	Do	4 46.47	18.18	0 32 29.63	3 38.37	3 30 28.2	23 19.1	64.45	16 2.55
31	Fr	4 28.29	18.13	0 36 8.00	3 38.43	3 53 47.3	23 14.7	64.46	16 2.28
April 1	Sa	4 10.16	18.04	0 39 46.43	3 38.51	4 17 2.0	23 9.9	64.47	16 2.00
2	St	3 52.12	17.94	0 43 24.94	3 38.62	4 40 11.9	23 4.8	64.49	16 1.73
3	Mo	3 34.18	17.82	0 47 3.56	3 38.73	5 3 16.7	22 59.2	64.51	16 1.46
4	Di	+3 16.36	17.68	0 50 42.29	3 38.87	+5 26 15.9	22 53.4	64.53	16 1.19
5	Mi	2 58.68	17.54	0 54 21.16	3 39.02	5 49 9.3	22 47.2	64.56	16 0.92
6	Do	2 41.14	17.36	0 58 0.18	3 39.19	6 11 56.5	22 40.7	64.59	16 0.65
7	Fr	2 23.78	17.16	1 1 39.37	3 39.39	6 34 37.2	22 33.9	64.62	16 0.38
8	Sa	2 6.62	16.95	1 5 18.76	3 39.60	6 57 11.1	22 26.7	64.65	16 0.11
9	St	1 49.67	16.72	1 8 58.36	3 39.84	7 19 37.8	22 19.3	64.68	15 59.84
10	Mo	+1 32.95	16.46	1 12 38.20	3 40.09	+7 41 57.1	22 11.5	64.72	15 59.56
11	Di	1 16.49	16.18	1 16 18.29	3 40.38	8 4 8.6	22 3.4	64.76	15 59.29
12	Mi	1 0.31	15.88	1 19 58.67	3 40.67	8 26 12.0	21 55.0	64.80	15 59.02
13	Do	0 44.43	15.56	1 23 39.34	3 40.99	8 48 7.0	21 46.4	64.84	15 58.74
14	Fr	0 28.87	15.23	1 27 20.33	3 41.34	9 9 53.4	21 37.4	64.89	15 58.47
15	Sa	+0 13.64	14.86	1 31 1.67	3 41.69	9 31 30.8	21 28.0	64.94	15 58.19
16	St	—0 1.22	14.48	1 34 43.36	3 42.07	+9 52 58.8	21 18.3	64.99	15 57.92
17	Mo	0 15.70	14.10	1 38 25.43	3 42.46	10 14 17.1	21 8.4	65.04	15 57.65
18	Di	0 29.80	13.69	1 42 7.89	3 42.86	10 35 25.5	20 58.1	65.09	15 57.38
19	Mi	0 43.49	13.27	1 45 50.75	3 43.29	10 56 23.6	20 47.3	65.15	15 57.11
20	Do	0 56.76	12.84	1 49 34.04	3 43.71	11 17 10.9	20 36.3	65.21	15 56.84
21	Fr	1 9.60	12.40	1 53 17.75	3 44.15	11 37 47.2	20 24.8	65.27	15 56.57
22	Sa	—1 22.00	11.95	1 57 1.90	3 44.61	+11 58 12.0	20 13.1	65.34	15 56.31
23	St	1 33.95	11.49	2 0 46.51	3 45.06	12 18 25.1	20 1.0	65.40	15 56.05
24	Mo	1 45.44	11.02	2 4 31.57	3 45.53	12 38 26.1	19 48.6	65.47	15 55.79
25	Di	1 56.46	10.55	2 8 17.10	3 46.01	12 58 14.7	19 35.7	65.54	15 55.54
26	Mi	2 7.01	10.06	2 12 3.11	3 46.50	13 17 50.4	19 22.5	65.61	15 55.29
27	Do	2 17.07	9.57	2 15 49.61	3 46.98	13 37 12.9	19 9.1	65.68	15 55.04
28	Fr	—2 26.64	9.08	2 19 36.59	3 47.48	+13 56 22.0	18 55.2	65.76	15 54.80
29	Sa	2 35.72	8.57	2 23 24.07	3 47.99	14 15 17.2	18 41.1	65.83	15 54.55
30	St	2 44.29	8.05	2 27 12.06	3 48.50	14 33 58.3	18 26.6	65.91	15 54.32
Mai 1	Mo	2 52.34	7.54	2 31 0.56	3 49.02	14 52 24.9	18 11.7	65.98	15 54.08
2	Di	2 59.88	7.02	2 34 49.58	3 49.54	15 10 36.6	17 56.6	66.06	15 53.85
3	Mi	—3 6.90		2 38 39.12		+15 28 33.2		66.14	15 53.62

Tag	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	Nutation in AR. kurzp. Gl.	Mittleres Äquinoktium 1933.0 Länge		Breite	log R		Aufgang in {+50° Breite, 0h Länge}	Untergang in {+50° Breite, 0h Länge}
1933	2427	h m s	s in 0.001		° ′ ″	′ ″	″ in 0.01			h m	h m
März 23	154.5	12 0 7.283	+413	+17	1 54 51.4	59 30.1	−11	9.998 6547	1254	5 58	18 17
24	155.5	12 4 3.837	411	+13	2 54 21.5	59 28.1	+ 2	9.998 7801	1252	5 56	18 18
25	156.5	12 8 0.390	409	+ 7	3 53 49.6	59 26.2	+16	9.998 9053	1249	5 53	18 20
26	157.5	12 11 56.944	408	+ 1	4 53 15.8	59 24.1	+29	9.999 0302	1246	5 51	18 21
27	158.5	12 15 53.498	406	− 6	5 52 39.9	59 22.0	+41	9.999 1548	1241	5 49	18 23
28	159.5	12 19 50.051	405	−10	6 52 1.9	59 19.9	+51	9.999 2789	1238	5 47	18 25
29	160.5	12 23 46.605	+403	−12	7 51 21.8	59 17.7	+58	9.999 4027	1235	5 45	18 26
30	161.5	12 27 43.159	401	−12	8 50 39.5	59 15.4	+62	9.999 5262	1231	5 42	18 28
31	162.5	12 31 39.712	399	−10	9 49 54.9	59 13.2	+64	9.999 6493	1229	5 40	18 29
April 1	163.5	12 35 36.266	398	− 6	10 49 8.1	59 10.9	+64	9.999 7722	1226	5 38	18 31
2	164.5	12 39 32.820	396	− 2	11 48 19.0	59 8.6	+61	9.999 8948	1225	5 36	18 33
3	165.5	12 43 29.374	395	+ 3	12 47 27.6	59 6.3	+55	0.000 0173	1224	5 34	18 34
4	166.5	12 47 25.928	+393	+ 7	13 46 33.9	59 4.0	+46	0.000 1397	1223	5 31	18 36
5	167.5	12 51 22.482	392	+10	14 45 37.9	59 1.6	+36	0.000 2620	1223	5 29	18 37
6	168.5	12 55 19.035	390	+10	15 44 39.5	58 59.4	+24	0.000 3843	1225	5 27	18 39
7	169.5	12 59 15.589	389	+ 7	16 43 38.9	58 57.1	+11	0.000 5068	1227	5 25	18 40
8	170.5	13 3 12.144	387	+ 2	17 42 36.0	58 55.0	− 2	0.000 6295	1229	5 23	18 42
9	171.5	13 7 8.698	386	− 4	18 41 31.0	58 52.8	−15	0.000 7524	1233	5 21	18 43
10	172.5	13 11 5.252	+385	−10	19 40 23.8	58 50.7	−27	0.000 8757	1236	5 19	18 45
11	173.5	13 15 1.806	384	−14	20 39 14.5	58 48.8	−37	0.000 9993	1240	5 17	18 46
12	174.5	13 18 58.360	383	−16	21 38 3.3	58 46.9	−44	0.001 1233	1241	5 15	18 48
13	175.5	13 22 54.914	381	−13	22 36 50.2	58 45.1	−48	0.001 2474	1243	5 13	18 49
14	176.5	13 26 51.469	381	− 8	23 35 35.3	58 43.4	−49	0.001 3717	1242	5 10	18 51
15	177.5	13 30 48.023	379	− 1	24 34 18.7	58 41.6	−47	0.001 4959	1240	5 8	18 52
16	178.5	13 34 44.578	+379	+ 8	25 33 0.3	58 40.0	−42	0.001 6199	1237	5 6	18 54
17	179.5	13 38 41.132	378	+15	26 31 40.3	58 38.4	−33	0.001 7436	1231	5 4	18 56
18	180.5	13 42 37.687	378	+18	27 30 18.7	58 36.7	−23	0.001 8667	1224	5 2	18 57
19	181.5	13 46 34.242	377	+18	28 28 55.4	58 35.0	−11	0.001 9891	1216	5 0	18 59
20	182.5	13 50 30.797	376	+15	29 27 30.4	58 33.4	+ 2	0.002 1107	1205	4 58	19 0
21	183.5	13 54 27.351	376	+10	30 26 3.8	58 31.7	+16	0.002 2312	1194	4 56	19 2
22	184.5	13 58 23.906	+375	+ 3	31 24 35.5	58 29.9	+29	0.002 3506	1181	4 54	19 4
23	185.5	14 2 20.461	375	− 4	32 23 5.4	58 28.1	+41	0.002 4687	1168	4 52	19 5
24	186.5	14 6 17.017	375	− 9	33 21 33.5	58 26.2	+51	0.002 5855	1155	4 51	19 7
25	187.5	14 10 13.572	375	−12	34 19 59.7	58 24.4	+58	0.002 7010	1141	4 49	19 8
26	188.5	14 14 10.127	375	−12	35 18 24.1	58 22.6	+62	0.002 8151	1126	4 47	19 10
27	189.5	14 18 6.682	375	−10	36 16 46.7	58 20.5	+65	0.002 9277	1113	4 45	19 12
28	190.5	14 22 3.238	+375	− 7	37 15 7.2	58 18.6	+65	0.003 0390	1099	4 43	19 13
29	191.5	14 25 59.793	375	− 3	38 13 25.8	58 16.7	+62	0.003 1489	1086	4 42	19 15
30	192.5	14 29 56.349	375	+ 2	39 11 42.5	58 14.6	+56	0.003 2575	1073	4 40	19 16
Mai 1	193.5	14 33 52.905	375	+ 6	40 9 57.1	58 12.7	+49	0.003 3648	1060	4 38	19 18
2	194.5	14 37 49.460	376	+ 9	41 8 9.8	58 10.6	+38	0.003 4708	1048	4 36	19 19
3	195.5	14 41 46.016	+376	+ 9	42 6 20.4		+26	0.003 5756		4 34	19 21

Tag	Wochentag	0^h Welt-Zeit: Zeitgleichung Mittlere Zeit *minus* Wahre Zeit		Scheinbare Rektaszension		Scheinbare Deklination		Halbe Durchgangs-Dauer St.-Zt.	Halbmesser
1933		m s	s	h m s	m s	° ′ ″	′ ″	s	′ ″
Mai 3	Mi	−3 6.90	6.49	2 38 39.12	3 50.06	+15 28 33.2	17 41.2	66.14	15 53.62
4	Do	3 13.39	5.95	2 42 29.18	3 50.60	15 46 14.4	17 25.5	66.22	15 53.39
5	Fr	3 19.34	5.42	2 46 19.78	3 51.14	16 3 39.9	17 9.4	66.30	15 53.16
6	Sa	3 24.76	4.87	2 50 10.92	3 51.69	16 20 49.3	16 53.1	66.38	15 52.94
7	St	3 29.63	4.32	2 54 2.61	3 52.23	16 37 42.4	16 36.5	66.47	15 52.72
8	Mo	3 33.95	3.77	2 57 54.84	3 52.79	16 54 18.9	16 19.6	66.55	15 52.50
9	Di	−3 37.72	3.20	3 1 47.63	3 53.36	+17 10 38.5	16 2.4	66.63	15 52.28
10	Mi	3 40.92	2.62	3 5 40.99	3 53.94	17 26 40.9	15 45.0	66.71	15 52.06
11	Do	3 43.54	2.04	3 9 34.93	3 54.51	17 42 25.9	15 27.3	66.79	15 51.85
12	Fr	3 45.58	1.47	3 13 29.44	3 55.09	17 57 53.2	15 9.3	66.87	15 51.63
13	Sa	3 47.05	0.87	3 17 24.53	3 55.69	18 13 2.5	14 51.1	66.96	15 51.42
14	St	3 47.92	0.28	3 21 20.22	3 56.27	18 27 53.6	14 32.5	67.04	15 51.21
15	Mo	−3 48.20	0.31	3 25 16.49	3 56.87	+18 42 26.1	14 13.7	67.12	15 51.00
16	Di	3 47.89	0.89	3 29 13.36	3 57.45	18 56 39.8	13 54.6	67.20	15 50.79
17	Mi	3 47.00	1.48	3 33 10.81	3 58.03	19 10 34.4	13 35.2	67.28	15 50.59
18	Do	3 45.52	2.06	3 37 8.84	3 58.62	19 24 9.6	13 15.6	67.36	15 50.39
19	Fr	3 43.46	2.63	3 41 7.46	3 59.18	19 37 25.2	12 55.5	67.44	15 50.19
20	Sa	3 40.83	3.19	3 45 6.64	3 59.75	19 50 20.7	12 35.3	67.52	15 50.00
21	St	−3 37.64	3.74	3 49 6.39	4 0.30	+20 2 56.0	12 14.8	67.59	15 49.81
22	Mo	3 33.90	4.28	3 53 6.69	4 0.84	20 15 10.8	11 54.1	67.67	15 49.63
23	Di	3 29.62	4.82	3 57 7.53	4 1.37	20 27 4.9	11 33.0	67.74	15 49.45
24	Mi	3 24.80	5.33	4 1 8.90	4 1.89	20 38 37.9	11 11.7	67.81	15 49.28
25	Do	3 19.47	5.83	4 5 10.79	4 2.39	20 49 49.6	10 50.2	67.88	15 49.11
26	Fr	3 13.64	6.32	4 9 13.18	4 2.88	21 0 39.8	10 28.5	67.95	15 48.95
27	Sa	−3 7.32	6.80	4 13 16.06	4 3.36	+21 11 8.3	10 6.5	68.02	15 48.79
28	St	3 0.52	7.26	4 17 19.42	4 3.81	21 21 14.8	9 44.3	68.09	15 48.63
29	Mo	2 53.26	7.70	4 21 23.23	4 4.26	21 30 59.1	9 21.9	68.16	15 48.48
30	Di	2 45.56	8.12	4 25 27.49	4 4.68	21 40 21.0	8 59.3	68.22	15 48.33
31	Mi	2 37.44	8.53	4 29 32.17	4 5.09	21 49 20.3	8 36.5	68.28	15 48.19
Juni 1	Do	2 28.91	8.92	4 33 37.26	4 5.48	21 57 56.8	8 13.5	68.34	15 48.06
2	Fr	−2 19.99	9.30	4 37 42.74	4 5.85	+22 6 10.3	7 50.5	68.40	15 47.92
3	Sa	2 10.69	9.65	4 41 48.59	4 6.21	22 14 0.8	7 27.1	68.45	15 47.79
4	St	2 1.04	10.00	4 45 54.80	4 6.56	22 21 27.9	7 3.7	68.50	15 47.67
5	Mo	1 51.04	10.32	4 50 1.36	4 6.88	22 28 31.6	6 40.2	68.55	15 47.54
6	Di	1 40.72	10.63	4 54 8.24	4 7.18	22 35 11.8	6 16.5	68.60	15 47.42
7	Mi	1 30.09	10.93	4 58 15.42	4 7.49	22 41 28.3	5 52.6	68.65	15 47.31
8	Do	−1 19.16	11.21	5 2 22.91	4 7.77	+22 47 20.9	5 28.8	68.69	15 47.19
9	Fr	1 7.95	11.48	5 6 30.68	4 8.04	22 52 49.7	5 4.6	68.73	15 47.08
10	Sa	0 56.47	11.73	5 10 38.72	4 8.29	22 57 54.3	4 40.5	68.76	15 46.97
11	St	0 44.74	11.97	5 14 47.01	4 8.53	23 2 34.8	4 16.2	68.79	15 46.87
12	Mo	0 32.77	12.19	5 18 55.54	4 8.75	23 6 51.0	3 51.9	68.82	15 46.76
13	Di	−0 20.58		5 23 4.29		+23 10 42.9		68.85	15 46.66

Tag	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	Nutation in AR. kurzp. Gl.	Mittleres Äquinoktium 1933.0 Länge		Breite	log R		Aufgang in +50° Breite 0h Länge	Untergang in +50° Breite 0h Länge
1933	2427	h m s	in 0.001 s		° ′ ″	′ ″	in 0.01″			h m	h m
Mai 3	195.5	14 41 46.016	+376	+ 9	42 6 20.4	58 8.7	+26	0.003 5756	1038	4 34	19 21
4	196.5	14 45 42.572	376	+ 7	43 4 29.1	58 6.6	+14	0.003 6794	1028	4 33	19 22
5	197.5	14 49 39.128	377	+ 3	44 2 35.7	58 4.7	+ 2	0.003 7822	1019	4 31	19 24
6	198.5	14 53 35.684	378	− 3	45 0 40.4	58 2.8	−11	0.003 8841	1011	4 29	19 25
7	199.5	14 57 32.241	379	− 9	45 58 43.2	58 1.0	−24	0.003 9852	1003	4 27	19 27
8	200.5	15 1 28.797	380	−14	46 56 44.2	57 59.1	−34	0.004 0855	998	4 26	19 28
9	201.5	15 5 25.353	+381	−17	47 54 43.3	57 57.5	−41	0.004 1853	991	4 24	19 30
10	202.5	15 9 21.910	382	−16	48 52 40.8	57 56.0	−46	0.004 2844	986	4 23	19 31
11	203.5	15 13 18.466	383	−11	49 50 36.8	57 54.4	−48	0.004 3830	979	4 21	19 33
12	204.5	15 17 15.023	384	− 4	50 48 31.2	57 53.1	−47	0.004 4809	972	4 19	19 34
13	205.5	15 21 11.579	386	+ 5	51 46 24.3	57 51.8	−42	0.004 5781	962	4 18	19 36
14	206.5	15 25 8.136	387	+13	52 44 16.1	57 50.6	−34	0.004 6743	953	4 16	19 37
15	207.5	15 29 4.693	+389	+18	53 42 6.7	57 49.4	−24	0.004 7696	940	4 15	19 39
16	208.5	15 33 1.250	390	+20	54 39 56.1	57 48.2	−12	0.004 8636	927	4 13	19 40
17	209.5	15 36 57.807	392	+18	55 37 44.3	57 47.1	+ 1	0.004 9563	911	4 12	19 41
18	210.5	15 40 54.364	394	+13	56 35 31.4	57 46.0	+14	0.005 0474	895	4 11	19 42
19	211.5	15 44 50.921	395	+ 6	57 33 17.4	57 44.9	+26	0.005 1369	877	4 9	19 44
20	212.5	15 48 47.479	397	− 1	58 31 2.3	57 43.7	+38	0.005 2246	858	4 8	19 45
21	213.5	15 52 44.036	+399	− 7	59 28 46.0	57 42.5	+47	0.005 3104	838	4 7	19 46
22	214.5	15 56 40.593	401	−10	60 26 28.5	57 41.4	+54	0.005 3942	817	4 6	19 47
23	215.5	16 0 37.151	403	−12	61 24 9.9	57 40.1	+60	0.005 4759	796	4 5	19 49
24	216.5	16 4 33.708	406	−10	62 21 50.0	57 39.0	+63	0.005 5555	775	4 3	19 50
25	217.5	16 8 30.266	408	− 8	63 19 29.0	57 37.6	+62	0.005 6330	753	4 2	19 52
26	218.5	16 12 26.824	410	− 4	64 17 6.6	57 36.4	+59	0.005 7083	731	4 1	19 53
27	219.5	16 16 23.381	+412	+ 1	65 14 43.0	57 35.1	+53	0.005 7814	710	4 0	19 54
28	220.5	16 20 19.939	415	+ 6	66 12 18.1	57 33.9	+46	0.005 8524	689	4 0	19 55
29	221.5	16 24 16.497	417	+ 9	67 9 52.0	57 32.5	+37	0.005 9213	668	3 59	19 56
30	222.5	16 28 13.055	420	+10	68 7 24.5	57 31.2	+25	0.005 9881	648	3 58	19 57
31	223.5	16 32 9.613	423	+ 8	69 4 55.7	57 29.8	+12	0.006 0529	629	3 57	19 58
Juni 1	224.5	16 36 6.171	425	+ 4	70 2 25.5	57 28.6	0	0.006 1158	610	3 56	19 59
2	225.5	16 40 2.729	+428	− 1	70 59 54.1	57 27.3	−13	0.006 1768	593	3 55	20 0
3	226.5	16 43 59.287	431	− 8	71 57 21.4	57 26.0	−25	0.006 2361	577	3 55	20 1
4	227.5	16 47 55.845	433	−14	72 54 47.4	57 24.8	−35	0.006 2938	562	3 54	20 2
5	228.5	16 51 52.404	436	−18	73 52 12.2	57 23.6	−43	0.006 3500	549	3 53	20 3
6	229.5	16 55 48.962	439	−18	74 49 35.8	57 22.6	−48	0.006 4049	536	3 53	20 4
7	230.5	16 59 45.520	442	−14	75 46 58.4	57 21.7	−50	0.006 4585	524	3 52	20 5
8	231.5	17 3 42.078	+445	− 7	76 44 20.1	57 20.8	−48	0.006 5109	512	3 52	20 5
9	232.5	17 7 38.637	448	+ 1	77 41 40.9	57 20.1	−43	0.006 5621	500	3 51	20 6
10	233.5	17 11 35.195	451	+ 9	78 39 1.0	57 19.4	−36	0.006 6121	487	3 51	20 7
11	234.5	17 15 31.754	454	+16	79 36 20.4	57 19.0	−27	0.006 6608	474	3 51	20 8
12	235.5	17 19 28.312	457	+19	80 33 39.4	57 18.5	−16	0.006 7082	458	3 51	20 8
13	236.5	17 23 24.871	+461	+19	81 30 57.9		− 3	0.006 7540		3 50	20 9

Sonne 1933

Tag	Wochentag	0h Welt-Zeit: Zeitgleichung Mittlere Zeit *minus* Wahre Zeit		Scheinbare Rektaszension		Scheinbare Deklination		Halbe Durchgangs-Dauer St.-Zt.	Halbmesser
1933		m s	s	h m s	m s	° ′ ″	′ ″	s	′ ″
Juni 13	Di	−0 20.58	12.39	5 23 4.29	4 8.94	+23 10 42.9	3 27.4	68.85	15 46.66
14	Mi	−0 8.19	12.56	5 27 13.23	4 9.12	23 14 10.3	3 2.9	68.87	15 46.57
15	Do	+0 4.37	12.72	5 31 22.35	4 9.28	23 17 13.2	2 38.2	68.89	15 46.47
16	Fr	0 17.09	12.84	5 35 31.63	4 9.41	23 19 51.4	2 13.6	68.90	15 46.39
17	Sa	0 29.93	12.96	5 39 41.04	4 9.51	23 22 5.0	1 48.8	68.92	15 46.30
18	St	0 42.89	13.03	5 43 50.55	4 9.59	23 23 53.8	1 24.0	68.93	15 46.22
19	Mo	+0 55.92	13.08	5 48 0.14	4 9.64	+23 25 17.8	0 59.1	68.94	15 46.15
20	Di	1 9.00	13.11	5 52 9.78	4 9.67	23 26 16.9	0 34.4	68.94	15 46.08
21	Mi	1 22.11	13.11	5 56 19.45	4 9.67	23 26 51.3	0 9.5	68.94	15 46.02
22	Do	1 35.22	13.08	6 0 29.12	4 9.64	23 27 0.8	0 15.4	68.94	15 45.96
23	Fr	1 48.30	13.03	6 4 38.76	4 9.58	23 26 45.4	0 40.2	68.93	15 45.91
24	Sa	2 1.33	12.94	6 8 48.34	4 9.51	23 26 5.2	1 5.0	68.92	15 45.86
25	St	+2 14.27	12.84	6 12 57.85	4 9.39	+23 25 0.2	1 29.7	68.91	15 45.82
26	Mo	2 27.11	12.70	6 17 7.24	4 9.26	23 23 30.5	1 54.5	68.90	15 45.79
27	Di	2 39.81	12.54	6 21 16.50	4 9.10	23 21 36.0	2 19.1	68.88	15 45.76
28	Mi	2 52.35	12.35	6 25 25.60	4 8.91	23 19 16.9	2 43.7	68.85	15 45.73
29	Do	3 4.70	12.14	6 29 34.51	4 8.69	23 16 33.2	3 8.1	68.83	15 45.71
30	Fr	3 16.84	11.89	6 33 43.20	4 8.46	23 13 25.1	3 32.5	68.80	15 45.70
Juli 1	Sa	+3 28.73	11.64	6 37 51.66	4 8.19	+23 9 52.6	3 56.9	68.77	15 45.69
2	St	3 40.37	11.36	6 41 59.85	4 7.92	23 5 55.7	4 21.0	68.73	15 45.68
3	Mo	3 51.73	11.06	6 46 7.77	4 7.61	23 1 34.7	4 45.0	68.69	15 45.68
4	Di	4 2.79	10.73	6 50 15.38	4 7.30	22 56 49.7	5 9.0	68.65	15 45.68
5	Mi	4 13.52	10.40	6 54 22.68	4 6.96	22 51 40.7	5 32.7	68.61	15 45.69
6	Do	4 23.92	10.05	6 58 29.64	4 6.61	22 46 8.0	5 56.4	68.57	15 45.70
7	Fr	+4 33.97	9.69	7 2 36.25	4 6.24	+22 40 11.6	6 20.0	68.52	15 45.71
8	Sa	4 43.66	9.31	7 6 42.49	4 5.87	22 33 51.6	6 43.4	68.46	15 45.73
9	St	4 52.97	8.92	7 10 48.36	4 5.48	22 27 8.2	7 6.6	68.41	15 45.75
10	Mo	5 1.89	8.52	7 14 53.84	4 5.08	22 20 1.6	7 29.7	68.35	15 45.77
11	Di	5 10.41	8.11	7 18 58.92	4 4.66	22 12 31.9	7 52.7	68.29	15 45.79
12	Mi	5 18.52	7.67	7 23 3.58	4 4.24	22 4 39.2	8 15.5	68.23	15 45.82
13	Do	+5 26.19	7.24	7 27 7.82	4 3.79	+21 56 23.7	8 38.1	68.17	15 45.85
14	Fr	5 33.43	6.78	7 31 11.61	4 3.33	21 47 45.6	9 0.5	68.11	15 45.89
15	Sa	5 40.21	6.30	7 35 14.94	4 2.86	21 38 45.1	9 22.7	68.04	15 45.93
16	St	5 46.51	5.82	7 39 17.80	4 2.38	21 29 22.4	9 44.8	67.97	15 45.97
17	Mo	5 52.33	5.31	7 43 20.18	4 1.87	21 19 37.6	10 6.5	67.89	15 46.02
18	Di	5 57.64	4.80	7 47 22.05	4 1.36	21 9 31.1	10 28.2	67.82	15 46.08
19	Mi	+6 2.44	4.28	7 51 23.41	4 0.83	+20 59 2.9	10 49.4	67.74	15 46.14
20	Do	6 6.72	3.73	7 55 24.24	4 0.29	20 48 13.5	11 10.6	67.66	15 46.20
21	Fr	6 10.45	3.18	7 59 24.53	3 59.74	20 37 2.9	11 31.4	67.58	15 46.27
22	Sa	6 13.63	2.61	8 3 24.27	3 59.17	20 25 31.5	11 52.1	67.50	15 46.35
23	St	6 16.24	2.04	8 7 23.44	3 58.60	20 13 39.4	12 12.3	67.42	15 46.43
24	Mo	+6 18.28		8 11 22.04		+20 1 27.1		67.34	15 46.51

Tag	0h Welt-Zeit									Aufgang	Untergang
	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	Nutation in AR. kurzp. Gl.	Mittleres Äquinoktium 1933.0 Länge		Breite	log R		in { +50° Breite 0h Länge	
1933	2427	h m s	in 0.001 s		° ′ ″	′ ″	in 0.01″			h m	h m
Juni 13	236.5	17 23 24.871	+461	+19	81 30 57.9	57 18.1	− 3	0.006 7540	441	3 50	20 9
14	237.5	17 27 21.429	464	+15	82 28 16.0	57 17.7	+11	0.006 7981	423	3 50	20 9
15	238.5	17 31 17.988	467	+ 9	83 25 33.7	57 17.4	+24	0.006 8404	403	3 50	20 10
16	239.5	17 35 14.546	470	+ 2	84 22 51.1	57 17.1	+35	0.006 8807	383	3 50	20 10
17	240.5	17 39 11.105	473	− 4	85 20 8.2	57 16.8	+45	0.006 9190	360	3 50	20 11
18	241.5	17 43 7.663	477	− 9	86 17 25.0	57 16.5	+54	0.006 9550	337	3 50	20 11
19	242.5	17 47 4.222	+480	−11	87 14 41.5	57 16.2	+59	0.006 9887	314	3 50	20 12
20	243.5	17 51 0.781	483	−10	88 11 57.7	57 15.9	+62	0.007 0201	289	3 50	20 12
21	244.5	17 54 57.339	486	− 8	89 9 13.6	57 15.5	+62	0.007 0490	264	3 50	20 12
22	245.5	17 58 53.898	490	− 4	90 6 29.1	57 15.3	+59	0.007 0754	239	3 50	20 12
23	246.5	18 2 50.456	493	0	91 3 44.4	57 14.8	+54	0.007 0993	214	3 51	20 13
24	247.5	18 6 47.015	496	+ 5	92 0 59.2	57 14.5	+46	0.007 1207	188	3 51	20 13
25	248.5	18 10 43.574	+499	+ 9	92 58 13.7	57 14.1	+37	0.007 1395	163	3 51	20 13
26	249.5	18 14 40.132	502	+10	93 55 27.8	57 13.7	+26	0.007 1558	138	3 52	20 13
27	250.5	18 18 36.691	506	+10	94 52 41.5	57 13.3	+14	0.007 1696	113	3 52	20 13
28	251.5	18 22 33.249	509	+ 7	95 49 54.8	57 12.9	0	0.007 1809	90	3 53	20 13
29	252.5	18 26 29.808	512	+ 1	96 47 7.7	57 12.5	−13	0.007 1899	67	3 53	20 13
30	253.5	18 30 26.366	515	− 6	97 44 20.2	57 12.0	−25	0.007 1966	45	3 54	20 13
Juli 1	254.5	18 34 22.925	+518	−12	98 41 32.2	57 11.6	−36	0.007 2011	25	3 55	20 13
2	255.5	18 38 19.483	521	−17	99 38 43.8	57 11.3	−45	0.007 2036	7	3 55	20 12
3	256.5	18 42 16.042	524	−18	100 35 55.1	57 10.9	−51	0.007 2043	12	3 56	20 12
4	257.5	18 46 12.600	528	−17	101 33 6.0	57 10.7	−54	0.007 2031	27	3 56	20 11
5	258.5	18 50 9.158	531	−11	102 30 16.7	57 10.6	−53	0.007 2004	43	3 57	20 11
6	259.5	18 54 5.717	534	− 3	103 27 27.3	57 10.5	−49	0.007 1961	57	3 58	20 10
7	260.5	18 58 2.275	+536	+ 6	104 24 37.8	57 10.5	−42	0.007 1904	70	3 59	20 10
8	261.5	19 1 58.833	539	+13	105 21 48.3	57 10.7	−32	0.007 1834	84	3 59	20 9
9	262.5	19 5 55.392	542	+18	106 18 59.0	57 11.0	−20	0.007 1750	98	4 0	20 9
10	263.5	19 9 51.950	545	+18	107 16 10.0	57 11.3	− 8	0.007 1652	113	4 1	20 8
11	264.5	19 13 48.508	548	+16	108 13 21.3	57 11.8	+ 6	0.007 1539	129	4 2	20 7
12	265.5	19 17 45.066	550	+10	109 10 33.1	57 12.3	+20	0.007 1410	146	4 3	20 6
13	266.5	19 21 41.624	+553	+ 4	110 7 45.4	57 12.9	+33	0.007 1264	165	4 4	20 6
14	267.5	19 25 38.182	556	− 2	111 4 58.3	57 13.5	+43	0.007 1099	185	4 5	20 5
15	268.5	19 29 34.740	558	− 7	112 2 11.8	57 14.1	+52	0.007 0914	206	4 6	20 4
16	269.5	19 33 31.298	561	−10	112 59 25.9	57 14.7	+58	0.007 0708	227	4 7	20 3
17	270.5	19 37 27.856	563	−10	113 56 40.6	57 15.3	+61	0.007 0481	250	4 8	20 2
18	271.5	19 41 24.413	565	− 9	114 53 55.9	57 16.1	+61	0.007 0231	274	4 10	20 1
19	272.5	19 45 20.971	+568	− 5	115 51 12.0	57 16.6	+59	0.006 9957	297	4 11	20 0
20	273.5	19 49 17.529	570	− 1	116 48 28.6	57 17.3	+54	0.006 9660	321	4 12	19 59
21	274.5	19 53 14.086	572	+ 4	117 45 45.9	57 17.9	+47	0.006 9339	347	4 13	19 58
22	275.5	19 57 10.644	575	+ 8	118 43 3.8	57 18.6	+38	0.006 8992	371	4 15	19 57
23	276.5	20 1 7.201	577	+10	119 40 22.4	57 19.1	+27	0.006 8621	396	4 16	19 55
24	277.5	20 5 3.758	+578	+11	120 37 41.5		+15	0.006 8225		4 18	19 54

Tag	Wochentag	0ʰ Welt-Zeit							
		Zeitgleichung Mittlere Zeit *minus* Wahre Zeit		Scheinbare Rektaszension		Scheinbare Deklination		Halbe Durchgangs-Dauer St.-Zt.	Halbmesser
1933		m s	s	h m s	m s	° ′ ″	′ ″	s	′ ″
Juli 24	Mo	+6 18.28	1.46	8 11 22.04	3 58.01	+20 1 27.1	12 32.5	67.34	15 46.51
25	Di	6 19.74	0.86	8 15 20.05	3 57.42	19 48 54.6	12 52.2	67.26	15 46.60
26	Mi	6 20.60	0.25	8 19 17.47	3 56.81	19 36 2.4	13 11.7	67.18	15 46.70
27	Do	6 20.85	0.36	8 23 14.28	3 56.20	19 22 50.7	13 30.9	67.09	15 46.80
28	Fr	6 20.49	0.97	8 27 10.48	3 55.58	19 9 19.8	13 49.8	67.01	15 46.91
29	Sa	6 19.52	1.60	8 31 6.06	3 54.96	18 55 30.0	14 8.4	66.92	15 47.02
30	St	+6 17.92	2.22	8 35 1.02	3 54.34	+18 41 21.6	14 26.8	66.83	15 47.14
31	Mo	6 15.70	2.85	8 38 55.36	3 53.71	18 26 54.8	14 44.8	66.75	15 47.26
Aug. 1	Di	6 12.85	3.47	8 42 49.07	3 53.08	18 12 10.0	15 2.5	66.66	15 47.39
2	Mi	6 9.38	4.09	8 46 42.15	3 52.47	17 57 7.5	15 20.1	66.57	15 47.51
3	Do	6 5.29	4.71	8 50 34.62	3 51.84	17 41 47.4	15 37.2	66.49	15 47.64
4	Fr	6 0.58	5.32	8 54 26.46	3 51.24	17 26 10.2	15 54.1	66.40	15 47.78
5	Sa	+5 55.26	5.92	8 58 17.70	3 50.63	+17 10 16.1	16 10.8	66.31	15 47.92
6	St	5 49.34	6.52	9 2 8.33	3 50.04	16 54 5.3	16 27.2	66.23	15 48.06
7	Mo	5 42.82	7.11	9 5 58.37	3 49.45	16 37 38.1	16 43.3	66.14	15 48.20
8	Di	5 35.71	7.68	9 9 47.82	3 48.87	16 20 54.8	16 59.1	66.05	15 48.34
9	Mi	5 28.03	8.25	9 13 36.69	3 48.31	16 3 55.7	17 14.7	65.97	15 48.49
10	Do	5 19.78	8.81	9 17 25.00	3 47.74	15 46 41.0	17 30.0	65.88	15 48.64
11	Fr	+5 10.97	9.37	9 21 12.74	3 47.19	+15 29 11.0	17 44.9	65.80	15 48.79
12	Sa	5 1.60	9.92	9 24 59.93	3 46.64	15 11 26.1	17 59.7	65.72	15 48.95
13	St	4 51.68	10.45	9 28 46.57	3 46.10	14 53 26.4	18 14.0	65.64	15 49.10
14	Mo	4 41.23	10.98	9 32 32.67	3 45.58	14 35 12.4	18 28.0	65.56	15 49.27
15	Di	4 30.25	11.50	9 36 18.25	3 45.05	14 16 44.4	18 41.8	65.48	15 49.43
16	Mi	4 18.75	12.02	9 40 3.30	3 44.54	13 58 2.6	18 55.3	65.40	15 49.60
17	Do	+4 6.73	12.52	9 43 47.84	3 44.03	+13 39 7.3	19 8.3	65.33	15 49.78
18	Fr	3 54.21	13.02	9 47 31.87	3 43.54	13 19 59.0	19 21.1	65.25	15 49.96
19	Sa	3 41.19	13.51	9 51 15.41	3 43.04	13 0 37.9	19 33.6	65.18	15 50.14
20	St	3 27.68	13.99	9 54 58.45	3 42.57	12 41 4.3	19 45.7	65.11	15 50.33
21	Mo	3 13.69	14.46	9 58 41.02	3 42.10	12 21 18.6	19 57.4	65.04	15 50.52
22	Di	2 59.23	14.92	10 2 23.12	3 41.63	12 1 21.2	20 8.9	64.97	15 50.72
23	Mi	+2 44.31	15.37	10 6 4.75	3 41.18	+11 41 12.3	20 19.9	64.91	15 50.92
24	Do	2 28.94	15.82	10 9 45.93	3 40.74	11 20 52.4	20 30.7	64.84	15 51.12
25	Fr	2 13.12	16.24	10 13 26.67	3 40.31	11 0 21.7	20 41.0	64.78	15 51.33
26	Sa	1 56.88	16.67	10 17 6.98	3 39.89	10 39 40.7	20 51.1	64.72	15 51.54
27	St	1 40.21	17.07	10 20 46.87	3 39.48	10 18 49.6	21 0.7	64.66	15 51.76
28	Mo	1 23.14	17.47	10 24 26.35	3 39.09	9 57 48.9	21 10.2	64.60	15 51.98
29	Di	+1 5.67	17.84	10 28 5.44	3 38.71	+ 9 36 38.7	21 19.2	64.55	15 52.20
30	Mi	0 47.83	18.20	10 31 44.15	3 38.36	9 15 19.5	21 27.9	64.49	15 52.43
31	Do	0 29.63	18.54	10 35 22.51	3 38.01	8 53 51.6	21 36.3	64.44	15 52.66
Sept. 1	Fr	+0 11.09	18.86	10 39 0.52	3 37.70	8 32 15.3	21 44.5	64.39	15 52.89
2	Sa	−0 7.77	19.16	10 42 38.22	3 37.39	8 10 30.8	21 52.3	64.35	15 53.12
3	St	−0 26.93		10 46 15.61		+ 7 48 38.5		64.31	15 53.35

Tag	0h Welt-Zeit									Aufgang	Untergang
	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	kurzp. Gl.	Mittleres Äquinoktium 1933.0 Länge		Breite	log R		in {+50° Breite, 0h Länge}	
1933	2427	h m s	in 0.001 s		° ′ ″	′ ″	″ in 0.01			h m	h m
Juli 24	277.5	20 5 3.758	+578	+11	120 37 41.5	57 19.7	+15	0.006 8225	421	4 18	19 54
25	278.5	20 9 0.316	580	+ 9	121 35 1.2	57 20.2	+ 1	0.006 7804	446	4 19	19 53
26	279.5	20 12 56.873	582	+ 4	122 32 21.4	57 20.8	−13	0.006 7358	470	4 20	19 52
27	280.5	20 16 53.430	584	− 2	123 29 42.2	57 21.3	−25	0.006 6888	492	4 21	19 50
28	281.5	20 20 49.987	586	− 9	124 27 3.5	57 21.7	−36	0.006 6396	514	4 23	19 49
29	282.5	20 24 46.544	587	−15	125 24 25.2	57 22.3	−45	0.006 5882	535	4 24	19 47
30	283.5	20 28 43.101	+589	−18	126 21 47.5	57 22.8	−52	0.006 5347	554	4 25	19 46
31	284.5	20 32 39.658	590	−18	127 19 10.3	57 23.3	−56	0.006 4793	571	4 26	19 45
Aug. 1	285.5	20 36 36.214	592	−13	128 16 33.6	57 23.9	−57	0.006 4222	587	4 28	19 43
2	286.5	20 40 32.771	593	− 6	129 13 57.5	57 24.5	−54	0.006 3635	601	4 29	19 42
3	287.5	20 44 29.328	594	+ 2	130 11 22.0	57 25.3	−47	0.006 3034	614	4 31	19 40
4	288.5	20 48 25.884	595	+10	131 8 47.3	57 26.2	−38	0.006 2420	626	4 32	19 39
5	289.5	20 52 22.440	+596	+15	132 6 13.5	57 27.0	−27	0.006 1794	638	4 34	19 37
6	290.5	20 56 18.997	597	+17	133 3 40.5	57 28.1	−14	0.006 1156	649	4 35	19 35
7	291.5	21 0 15.553	598	+16	134 1 8.6	57 29.2	+ 1	0.006 0507	660	4 37	19 34
8	292.5	21 4 12.109	599	+12	134 58 37.8	57 30.4	+15	0.005 9847	671	4 38	19 32
9	293.5	21 8 8.665	599	+ 6	135 56 8.2	57 31.8	+27	0.005 9176	684	4 40	19 30
10	294.5	21 12 5.221	600	− 1	136 53 40.0	57 33.1	+39	0.005 8492	698	4 41	19 28
11	295.5	21 16 1.777	+600	− 6	137 51 13.1	57 34.5	+48	0.005 7794	712	4 43	19 26
12	296.5	21 19 58.333	601	−10	138 48 47.6	57 36.0	+55	0.005 7082	728	4 44	19 25
13	297.5	21 23 54.888	602	−10	139 46 23.6	57 37.5	+59	0.005 6354	744	4 46	19 23
14	298.5	21 27 51.444	602	− 9	140 44 1.1	57 39.0	+60	0.005 5610	761	4 47	19 21
15	299.5	21 31 48.000	602	− 6	141 41 40.1	57 40.4	+59	0.005 4849	779	4 48	19 19
16	300.5	21 35 44.555	602	− 2	142 39 20.5	57 42.0	+55	0.005 4070	798	4 50	19 17
17	301.5	21 39 41.111	+602	+ 3	143 37 2.5	57 43.5	+49	0.005 3272	817	4 51	19 16
18	302.5	21 43 37.666	602	+ 7	144 34 46.0	57 45.0	+40	0.005 2455	836	4 53	19 14
19	303.5	21 47 34.221	602	+10	145 32 31.0	57 46.5	+30	0.005 1619	856	4 54	19 12
20	304.5	21 51 30.776	602	+11	146 30 17.5	57 48.0	+18	0.005 0763	877	4 56	19 10
21	305.5	21 55 27.331	602	+10	147 28 5.5	57 49.4	+ 5	0.004 9886	897	4 57	19 8
22	306.5	21 59 23.886	601	+ 6	148 25 54.9	57 50.7	− 9	0.004 8989	917	4 59	19 6
23	307.5	22 3 20.441	+600	0	149 23 45.6	57 52.2	−23	0.004 8072	937	5 0	19 4
24	308.5	22 7 16.996	600	− 6	150 21 37.8	57 53.4	−35	0.004 7135	956	5 2	19 2
25	309.5	22 11 13.551	599	−12	151 19 31.2	57 54.8	−45	0.004 6179	974	5 3	19 0
26	310.5	22 15 10.106	599	−17	152 17 26.0	57 56.1	−52	0.004 5205	991	5 5	18 58
27	311.5	22 19 6.660	598	−17	153 15 22.1	57 57.3	−56	0.004 4214	1006	5 6	18 56
28	312.5	22 23 3.215	597	−15	154 13 19.4	57 58.5	−57	0.004 3208	1019	5 8	18 54
29	313.5	22 26 59.769	+596	− 9	155 11 17.9	57 59.9	−55	0.004 2189	1031	5 9	18 52
30	314.5	22 30 56.324	595	− 1	156 9 17.8	58 1.2	−50	0.004 1158	1041	5 11	18 50
31	315.5	22 34 52.878	594	+ 7	157 7 19.0	58 2.5	−41	0.004 0117	1050	5 12	18 48
Sept. 1	316.5	22 38 49.432	593	+13	158 5 21.5	58 4.0	−30	0.003 9067	1056	5 14	18 45
2	317.5	22 42 45.986	592	+17	159 3 25.5	58 5.5	−17	0.003 8011	1063	5 15	18 43
3	318.5	22 46 42.541	+591	+17	160 1 31.0		− 4	0.003 6948		5 17	18 41

Sonne 1933

Tag	Wochentag	0h Welt-Zeit: Zeitgleichung, Mittlere Zeit *minus* Wahre Zeit (m s)	Diff. (s)	Scheinbare Rektaszension (h m s)	Diff. (m s)	Scheinbare Deklination (° ′ ″)	Diff. (′ ″)	Halbe Durchgangs-Dauer St.-Zt. (s)	Halbmesser (′ ″)
1933 Sept. 3	St	— 0 26.93	19.45	10 46 15.61	3 37.11	+7 48 38.5	21 59.8	64.31	15 53.35
4	Mo	0 46.38	19.70	10 49 52.72	3 36.85	7 26 38.7	22 7.1	64.27	15 53.59
5	Di	1 6.08	19.94	10 53 29.57	3 36.61	7 4 31.6	22 14.0	64.23	15 53.82
6	Mi	1 26.02	20.15	10 57 6.18	3 36.40	6 42 17.6	22 20.7	64.19	15 54.06
7	Do	1 46.17	20.35	11 0 42.58	3 36.21	6 19 56.9	22 27.0	64.16	15 54.30
8	Fr	2 6.52	20.52	11 4 18.79	3 36.04	5 57 29.9	22 33.1	64.14	15 54.54
9	Sa	— 2 27.04	20.67	11 7 54.83	3 35.88	+5 34 56.8	22 38.8	64.11	15 54.78
10	St	2 47.71	20.80	11 11 30.71	3 35.75	5 12 18.0	22 44.3	64.09	15 55.02
11	Mo	3 8.51	20.92	11 15 6.46	3 35.63	4 49 33.7	22 49.3	64.07	15 55.26
12	Di	3 29.43	21.01	11 18 42.09	3 35.54	4 26 44.4	22 54.2	64.05	15 55.51
13	Mi	3 50.44	21.09	11 22 17.63	3 35.47	4 3 50.2	22 58.5	64.04	15 55.75
14	Do	4 11.53	21.14	11 25 53.10	3 35.41	3 40 51.7	23 2.7	64.03	15 56.00
15	Fr	— 4 32.67	21.18	11 29 28.51	3 35.37	+3 17 49.0	23 6.4	64.02	15 56.25
16	Sa	4 53.85	21.20	11 33 3.88	3 35.36	2 54 42.6	23 9.8	64.01	15 56.51
17	St	5 15.05	21.21	11 36 39.24	3 35.35	2 31 32.8	23 12.8	64.01	15 56.76
18	Mo	5 36.26	21.18	11 40 14.59	3 35.37	2 8 20.0	23 15.6	64.01	15 57.02
19	Di	5 57.44	21.15	11 43 49.96	3 35.40	1 45 4.4	23 17.9	64.01	15 57.29
20	Mi	6 18.59	21.10	11 47 25.36	3 35.45	1 21 46.5	23 19.8	64.01	15 57.55
21	Do	— 6 39.69	21.04	11 51 0.81	3 35.52	+0 58 26.7	23 21.5	64.02	15 57.82
22	Fr	7 0.73	20.96	11 54 36.33	3 35.60	0 35 5.2	23 22.6	64.03	15 58.09
23	Sa	7 21.69	20.85	11 58 11.93	3 35.69	+0 11 42.6	23 23.5	64.05	15 58.36
24	St	7 42.54	20.74	12 1 47.62	3 35.82	—0 11 40.9	23 24.0	64.07	15 58.63
25	Mo	8 3.28	20.61	12 5 23.44	3 35.95	0 35 4.9	23 24.1	64.09	15 58.91
26	Di	8 23.89	20.45	12 8 59.39	3 36.10	0 58 29.0	23 23.8	64.12	15 59.19
27	Mi	— 8 44.34	20.27	12 12 35.49	3 36.28	—1 21 52.8	23 23.3	64.15	15 59.47
28	Do	9 4.61	20.08	12 16 11.77	3 36.47	1 45 16.1	23 22.5	64.18	15 59.75
29	Fr	9 24.69	19.86	12 19 48.24	3 36.69	2 8 38.6	23 21.2	64.21	16 0.03
30	Sa	9 44.55	19.62	12 23 24.93	3 36.94	2 31 59.8	23 19.6	64.24	16 0.31
Okt. 1	St	10 4.17	19.36	12 27 1.87	3 37.20	2 55 19.4	23 17.7	64.28	16 0.59
2	Mo	10 23.53	19.07	12 30 39.07	3 37.48	3 18 37.1	23 15.6	64.33	16 0.86
3	Di	—10 42.60	18.75	12 34 16.55	3 37.80	—3 41 52.7	23 13.0	64.37	16 1.14
4	Mi	11 1.35	18.43	12 37 54.35	3 38.13	4 5 5.7	23 10.2	64.42	16 1.42
5	Do	11 19.78	18.06	12 41 32.48	3 38.49	4 28 15.9	23 7.0	64.47	16 1.69
6	Fr	11 37.84	17.68	12 45 10.97	3 38.88	4 51 22.9	23 3.4	64.52	16 1.97
7	Sa	11 55.52	17.27	12 48 49.85	3 39.28	5 14 26.3	22 59.6	64.58	16 2.24
8	St	12 12.79	16.84	12 52 29.13	3 39.71	5 37 25.9	22 55.4	64.64	16 2.52
9	Mo	—12 29.63	16.40	12 56 8.84	3 40.15	—6 0 21.3	22 50.7	64.70	16 2.79
10	Di	12 46.03	15.93	12 59 48.99	3 40.63	6 23 12.0	22 45.8	64.76	16 3.06
11	Mi	13 1.96	15.44	13 3 29.62	3 41.11	6 45 57.8	22 40.5	64.83	16 3.33
12	Do	13 17.40	14.93	13 7 10.73	3 41.63	7 8 38.3	22 34.8	64.91	16 3.60
13	Fr	13 32.33	14.41	13 10 52.36	3 42.14	7 31 13.1	22 28.7	64.98	16 3.87
14	Sa	—13 46.74		13 14 34.50		—7 53 41.8		65.06	16 4.14

Tag	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	kurzp. Gl.	0h Welt-Zeit Mittleres Äquinoktium 1933.0 Länge	Diff.	Breite	log R	Diff.	Aufgang in +50° Breite 0h Länge	Untergang in +50° Breite 0h Länge
1933	2427	h m s	s in 0.001		° ′ ″	′ ″	″ in 0.01			h m	h m
Sept. 3	318.5	22 46 42.541	+591	+17	160 1 31.0	58 7.2	− 4	0.003 6948	1068	5 17	18 41
4	319.5	22 50 39.095	589	+13	160 59 38.2	58 8.8	+10	0.003 5880	1072	5 18	18 39
5	320.5	22 54 35.649	588	+ 7	161 57 47.0	58 10.6	+22	0.003 4808	1076	5 20	18 37
6	321.5	22 58 32.203	587	0	162 55 57.6	58 12.5	+35	0.003 3732	1081	5 21	18 34
7	322.5	23 2 28.757	586	− 6	163 54 10.1	58 14.4	+46	0.003 2651	1087	5 23	18 32
8	323.5	23 6 25.311	584	− 9	164 52 24.5	58 16.4	+54	0.003 1564	1092	5 24	18 30
9	324.5	23 10 21.865	+583	−11	165 50 40.9	58 18.5	+59	0.003 0472	1099	5 26	18 28
10	325.5	23 14 18.418	581	−10	166 48 59.4	58 20.5	+62	0.002 9373	1106	5 27	18 26
11	326.5	23 18 14.972	580	− 7	167 47 19.9	58 22.6	+62	0.002 8267	1114	5 29	18 24
12	327.5	23 22 11.526	578	− 3	168 45 42.5	58 24.7	+59	0.002 7153	1122	5 30	18 22
13	328.5	23 26 8.080	576	+ 1	169 44 7.2	58 26.8	+54	0.002 6031	1132	5 32	18 20
14	329.5	23 30 4.633	575	+ 6	170 42 34.0	58 29.0	+45	0.002 4899	1142	5 33	18 18
15	330.5	23 34 1.187	+573	+ 9	171 41 3.0	58 31.0	+35	0.002 3757	1153	5 35	18 15
16	331.5	23 37 57.741	571	+11	172 39 34.0	58 33.1	+24	0.002 2604	1163	5 36	18 13
17	332.5	23 41 54.294	569	+10	173 38 7.1	58 35.3	+12	0.002 1441	1175	5 38	18 10
18	333.5	23 45 50.848	567	+ 7	174 36 42.4	58 37.2	− 2	0.002 0266	1187	5 39	18 8
19	334.5	23 49 47.401	565	+ 2	175 35 19.6	58 39.3	−15	0.001 9079	1199	5 41	18 6
20	335.5	23 53 43.955	564	− 4	176 33 58.9	58 41.2	−27	0.001 7880	1211	5 42	18 4
21	336.5	23 57 40.508	+562	−10	177 32 40.1	58 43.0	−37	0.001 6669	1223	5 44	18 1
22	337.5	0 1 37.062	560	−15	178 31 23.1	58 44.9	−46	0.001 5446	1234	5 45	17 59
23	338.5	0 5 33.615	558	−17	179 30 8.0	58 46.7	−51	0.001 4212	1243	5 47	17 57
24	339.5	0 9 30.169	556	−15	180 28 54.7	58 48.3	−53	0.001 2969	1251	5 48	17 55
25	340.5	0 13 26.722	554	−10	181 27 43.0	58 50.1	−52	0.001 1718	1258	5 50	17 53
26	341.5	0 17 23.276	553	− 2	182 26 33.1	58 51.8	−48	0.001 0460	1262	5 51	17 50
27	342.5	0 21 19.829	+551	+ 6	183 25 24.9	58 53.4	−40	0.000 9198	1266	5 53	17 48
28	343.5	0 25 16.383	549	+12	184 24 18.3	58 55.2	−30	0.000 7932	1267	5 54	17 46
29	344.5	0 29 12.936	547	+17	185 23 13.5	58 57.0	−18	0.000 6665	1266	5 56	17 44
30	345.5	0 33 9.490	545	+17	186 22 10.5	58 58.7	− 4	0.000 5399	1264	5 57	17 42
Okt. 1	346.5	0 37 6.044	543	+14	187 21 9.2	59 0.6	+10	0.000 4135	1260	5 59	17 39
2	347.5	0 41 2.597	542	+ 9	188 20 9.8	59 2.5	+24	0.000 2875	1257	6 0	17 37
3	348.5	0 44 59.151	+540	+ 2	189 19 12.3	59 4.5	+35	0.000 1618	1251	6 2	17 35
4	349.5	0 48 55.704	539	− 4	190 18 16.8	59 6.6	+45	0.000 0367	1247	6 4	17 33
5	350.5	0 52 52.258	537	− 9	191 17 23.4	59 8.7	+54	9.999 9120	1242	6 5	17 31
6	351.5	0 56 48.812	535	−11	192 16 32.1	59 10.9	+60	9.999 7878	1236	6 7	17 29
7	352.5	1 0 45.366	534	−11	193 15 43.0	59 13.1	+63	9.999 6642	1232	6 8	17 27
8	353.5	1 4 41.919	532	− 9	194 14 56.1	59 15.3	+63	9.999 5410	1228	6 10	17 25
9	354.5	1 8 38.473	+531	− 5	195 14 11.4	59 17.6	+61	9.999 4182	1224	6 12	17 23
10	355.5	1 12 35.027	529	0	196 13 29.0	59 19.9	+57	9.999 2958	1221	6 13	17 21
11	356.5	1 16 31.581	528	+ 4	197 12 48.9	59 22.2	+50	9.999 1737	1218	6 15	17 18
12	357.5	1 20 28.135	526	+ 8	198 12 11.1	59 24.6	+40	9.999 0519	1217	6 16	17 16
13	358.5	1 24 24.689	524	+10	199 11 35.7	59 26.8	+28	9.998 9302	1215	6 18	17 14
14	359.5	1 28 21.243	+523	+10	200 11 2.5		+15	9.998 8087		6 20	17 12

Tag	Wochentag	0h Welt-Zeit: Zeitgleichung Mittlere Zeit *minus* Wahre Zeit		Scheinbare Rektaszension		Scheinbare Deklination		Halbe Durchgangs-Dauer St.-Zt.	Halbmesser
1933		m s	s	h m s	m s	° ′ ″	′ ″	s	′ ″
Okt. 14	Sa	−13 46.74	13.86	13 14 34.50	3 42.70	− 7 53 41.8	22 22.2	65.06	16 4.14
15	St	14 0.60	13.30	13 18 17.20	3 43.25	8 16 4.0	22 15.4	65.14	16 4.41
16	Mo	14 13.90	12.72	13 22 0.45	3 43.84	8 38 19.4	22 8.0	65.22	16 4.68
17	Di	14 26.62	12.13	13 25 44.29	3 44.42	9 0 27.4	22 0.4	65.31	16 4.95
18	Mi	14 38.75	11.52	13 29 28.71	3 45.04	9 22 27.8	21 52.3	65.39	16 5.22
19	Do	14 50.27	10.90	13 33 13.75	3 45.65	9 44 20.1	21 43.8	65.48	16 5.49
20	Fr	−15 1.17	10.27	13 36 59.40	3 46.28	−10 6 3.9	21 34.8	65.57	16 5.76
21	Sa	15 11.44	9.63	13 40 45.68	3 46.92	10 27 38.7	21 25.5	65.67	16 6.04
22	St	15 21.07	8.98	13 44 32.60	3 47.58	10 49 4.2	21 15.7	65.76	16 6.31
23	Mo	15 30.05	8.31	13 48 20.18	3 48.25	11 10 19.9	21 5.5	65.86	16 6.58
24	Di	15 38.36	7.64	13 52 8.43	3 48.92	11 31 25.4	20 54.9	65.96	16 6.85
25	Mi	15 46.00	6.94	13 55 57.35	3 49.61	11 52 20.3	20 44.0	66.06	16 7.12
26	Do	−15 52.94	6.24	13 59 46.96	3 50.31	−12 13 4.3	20 32.5	66.16	16 7.39
27	Fr	15 59.18	5.53	14 3 37.27	3 51.03	12 33 36.8	20 20.8	66.27	16 7.66
28	Sa	16 4.71	4.79	14 7 28.30	3 51.76	12 53 57.6	20 8.7	66.37	16 7.93
29	St	16 9.50	4.05	14 11 20.06	3 52.51	13 14 6.3	19 56.1	66.48	16 8.19
30	Mo	16 13.55	3.29	14 15 12.57	3 53.26	13 34 2.4	19 43.2	66.59	16 8.45
31	Di	16 16.84	2.52	14 19 5.83	3 54.04	13 53 45.6	19 29.9	66.70	16 8.71
Nov. 1	Mi	−16 19.36	1.74	14 22 59.87	3 54.82	−14 13 15.5	19 16.2	66.82	16 8.96
2	Do	16 21.10	0.93	14 26 54.69	3 55.62	14 32 31.7	19 2.2	66.93	16 9.21
3	Fr	16 22.03	0.12	14 30 50.31	3 56.43	14 51 33.9	18 47.7	67.04	16 9.46
4	Sa	16 22.15	0.70	14 34 46.74	3 57.26	15 10 21.6	18 32.9	67.16	16 9.71
5	St	16 21.45	1.53	14 38 44.00	3 58.09	15 28 54.5	18 17.7	67.28	16 9.95
6	Mo	16 19.92	2.38	14 42 42.09	3 58.93	15 47 12.2	18 2.0	67.39	16 10.19
7	Di	−16 17.54	3.23	14 46 41.02	3 59.78	−16 5 14.2	17 46.0	67.51	16 10.42
8	Mi	16 14.31	4.08	14 50 40.80	4 0.64	16 23 0.2	17 29.5	67.63	16 10.65
9	Do	16 10.23	4.94	14 54 41.44	4 1.50	16 40 29.7	17 12.7	67.75	16 10.88
10	Fr	16 5.29	5.80	14 58 42.94	4 2.36	16 57 42.4	16 55.5	67.87	16 11.11
11	Sa	15 59.49	6.68	15 2 45.30	4 3.23	17 14 37.9	16 37.8	67.99	16 11.33
12	St	15 52.81	7.54	15 6 48.53	4 4.10	17 31 15.7	16 19.8	68.11	16 11.55
13	Mo	−15 45.27	8.41	15 10 52.63	4 4.97	−17 47 35.5	16 1.2	68.23	16 11.77
14	Di	15 36.86	9.27	15 14 57.60	4 5.83	18 3 36.7	15 42.4	68.35	16 11.98
15	Mi	15 27.59	10.13	15 19 3.43	4 6.69	18 19 19.1	15 23.0	68.47	16 12.19
16	Do	15 17.46	10.99	15 23 10.12	4 7.54	18 34 42.1	15 3.4	68.59	16 12.40
17	Fr	15 6.47	11.83	15 27 17.66	4 8.39	18 49 45.5	14 43.2	68.70	16 12.61
18	Sa	14 54.64	12.66	15 31 26.05	4 9.21	19 4 28.7	14 22.7	68.82	16 12.82
19	St	−14 41.98	13.48	15 35 35.26	4 10.04	−19 18 51.4	14 1.8	68.93	16 13.02
20	Mo	14 28.50	14.29	15 39 45.30	4 10.85	19 32 53.2	13 40.5	69.05	16 13.23
21	Di	14 14.21	15.08	15 43 56.15	4 11.64	19 46 33.7	13 18.8	69.16	16 13.43
22	Mi	13 59.13	15.86	15 48 7.79	4 12.41	19 59 52.5	12 56.7	69.27	16 13.63
23	Do	13 43.27	16.63	15 52 20.20	4 13.19	20 12 49.2	12 34.4	69.38	16 13.82
24	Fr	−13 26.64		15 56 33.39		−20 25 23.6		69.49	16 14.01

Tag	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	Nutation in AR. kurzp. Gl.	Mittleres Äquinoktium 1933.0 Länge		Mittleres Äquinoktium 1933.0 Breite	log R		Aufgang in {+50° Breite, 0h Länge}	Untergang in {+50° Breite, 0h Länge}
1933	2427	h m s	in 0.001 s		° ′ ″	′ ″	in 0.01″			h m	h m
Okt. 14	359.5	1 28 21.243	+523	+10	200 11 2.5	59 29.1	+15	9.998 8087	1215	6 20	17 12
15	360.5	1 32 17.797	522	+ 7	201 10 31.6	59 31.3	+ 3	9.998 6872	1215	6 21	17 10
16	361.5	1 36 14.352	521	+ 3	202 10 2.9	59 33.6	− 9	9.998 5657	1216	6 23	17 8
17	362.5	1 40 10.906	520	− 3	203 9 36.5	59 35.8	−21	9.998 4441	1217	6 24	17 6
18	363.5	1 44 7.460	519	− 9	204 9 12.3	59 37.9	−32	9.998 3224	1219	6 26	17 4
19	364.5	1 48 4.015	518	−14	205 8 50.2	59 39.8	−41	9.998 2005	1221	6 28	17 2
20	365.5	1 52 0.569	+517	−17	206 8 30.0	59 41.9	−47	9.998 0784	1223	6 29	17 0
21	366.5	1 55 57.124	517	−16	207 8 11.9	59 43.7	−49	9.997 9561	1222	6 31	16 58
22	367.5	1 59 53.678	516	−12	208 7 55.6	59 45.5	−49	9.997 8339	1223	6 32	16 56
23	368.5	2 3 50.233	515	− 4	209 7 41.1	59 47.2	−46	9.997 7116	1220	6 34	16 54
24	369.5	2 7 46.788	515	+ 4	210 7 28.3	59 48.9	−39	9.997 5896	1217	6 36	16 52
25	370.5	2 11 43.343	514	+11	211 7 17.2	59 50.6	−30	9.997 4679	1211	6 37	16 50
26	371.5	2 15 39.898	+513	+17	212 7 7.8	59 52.1	−18	9.997 3468	1203	6 39	16 49
27	372.5	2 19 36.453	513	+18	213 6 59.9	59 53.9	− 5	9.997 2265	1194	6 40	16 47
28	373.5	2 23 33.008	513	+16	214 6 53.8	59 55.4	+ 9	9.997 1071	1184	6 42	16 45
29	374.5	2 27 29.563	513	+11	215 6 49.2	59 57.2	+23	9.996 9887	1171	6 44	16 43
30	375.5	2 31 26.119	513	+ 4	216 6 46.4	59 58.8	+34	9.996 8716	1158	6 45	16 41
31	376.5	2 35 22.674	513	− 2	217 6 45.2	60 0.7	+44	9.996 7558	1143	6 47	16 40
Nov. 1	377.5	2 39 19.229	+513	− 7	218 6 45.9	60 2.4	+52	9.996 6415	1128	6 48	16 38
2	378.5	2 43 15.785	513	−10	219 6 48.3	60 4.2	+58	9.996 5287	1113	6 50	16 36
3	379.5	2 47 12.341	513	−11	220 6 52.5	60 6.1	+61	9.996 4174	1097	6 52	16 34
4	380.5	2 51 8.896	514	− 9	221 6 58.6	60 8.1	+61	9.996 3077	1081	6 54	16 33
5	381.5	2 55 5.452	515	− 6	222 7 6.7	60 10.0	+60	9.996 1996	1065	6 55	16 31
6	382.5	2 59 2.008	515	− 1	223 7 16.7	60 11.9	+56	9.996 0931	1050	6 57	16 30
7	383.5	3 2 58.564	+516	+ 3	224 7 28.6	60 13.9	+50	9.995 9881	1035	6 59	16 28
8	384.5	3 6 55.121	517	+ 7	225 7 42.5	60 15.9	+41	9.995 8846	1021	7 1	16 27
9	385.5	3 10 51.677	518	+ 9	226 7 58.4	60 17.9	+31	9.995 7825	1007	7 2	16 25
10	386.5	3 14 48.233	519	+10	227 8 16.3	60 19.8	+19	9.995 6818	993	7 4	16 24
11	387.5	3 18 44.790	520	+ 8	228 8 36.1	60 21.9	+ 6	9.995 5825	981	7 5	16 22
12	388.5	3 22 41.346	521	+ 4	229 8 58.0	60 23.7	− 7	9.995 4844	970	7 7	16 21
13	389.5	3 26 37.903	+523	− 2	230 9 21.7	60 25.7	−18	9.995 3874	958	7 9	16 20
14	390.5	3 30 34.460	524	− 8	231 9 47.4	60 27.6	−28	9.995 2916	949	7 10	16 18
15	391.5	3 34 31.017	525	−13	232 10 15.0	60 29.3	−37	9.995 1967	940	7 12	16 17
16	392.5	3 38 27.574	527	−17	233 10 44.3	60 31.0	−43	9.995 1027	931	7 13	16 15
17	393.5	3 42 24.131	529	−17	234 11 15.3	60 32.7	−46	9.995 0096	923	7 15	16 14
18	394.5	3 46 20.688	530	−14	235 11 48.0	60 34.1	−46	9.994 9173	915	7 17	16 13
19	395.5	3 50 17.245	+532	− 7	236 12 22.1	60 35.6	−43	9.994 8258	906	7 18	16 12
20	396.5	3 54 13.802	534	+ 1	237 12 57.7	60 36.8	−37	9.994 7352	896	7 20	16 11
21	397.5	3 58 10.360	536	+ 9	238 13 34.5	60 38.1	−28	9.994 6456	885	7 21	16 10
22	398.5	4 2 6.917	539	+15	239 14 12.6	60 39.3	−17	9.994 5571	872	7 23	16 9
23	399.5	4 6 3.475	540	+18	240 14 51.9	60 40.3	− 4	9.994 4699	858	7 24	16 8
24	400.5	4 10 0.033	+543	+18	241 15 32.2		+10	9.994 3841		7 26	16 7

Tag	Wochentag	Zeitgleichung Mittlere Zeit *minus* Wahre Zeit		Scheinbare Rektaszension		Scheinbare Deklination		Halbe Durchgangs-Dauer St.-Zt.	Halbmesser
		0h Welt-Zeit							
1933		m s	s	h m s	m s	° ′ ″	′ ″	s	′ ″
Nov. 24	Fr	−13 26.64	17.38	15 56 33.39	4 13.94	−20 25 23.6	12 11.7	69.49	16 14.01
25	Sa	13 9.26	18.13	16 0 47.33	4 14.68	20 37 35.3	11 48.7	69.60	16 14.20
26	St	12 51.13	18.85	16 5 2.01	4 15.41	20 49 24.0	11 25.2	69.70	16 14.39
27	Mo	12 32.28	19.57	16 9 17.42	4 16.13	21 0 49.2	11 1.6	69.80	16 14.57
28	Di	12 12.71	20.27	16 13 33.55	4 16.83	21 11 50.8	10 37.6	69.90	16 14.74
29	Mi	11 52.44	20.95	16 17 50.38	4 17.51	21 22 28.4	10 13.4	70.00	16 14.91
30	Do	−11 31.49	21.62	16 22 7.89	4 18.18	−21 32 41.8	9 48.8	70.09	16 15.08
Dez. 1	Fr	11 9.87	22.28	16 26 26.07	4 18.83	21 42 30.6	9 23.9	70.19	16 15.24
2	Sa	10 47.59	22.91	16 30 44.90	4 19.48	21 51 54.5	8 58.8	70.28	16 15.39
3	St	10 24.68	23.54	16 35 4.38	4 20.09	22 0 53.3	8 33.4	70.36	16 15.54
4	Mo	10 1.14	24.13	16 39 24.47	4 20.69	22 9 26.7	8 7.8	70.44	16 15.69
5	Di	9 37.01	24.70	16 43 45.16	4 21.26	22 17 34.5	7 41.9	70.52	16 15.83
6	Mi	− 9 12.31	25.26	16 48 6.42	4 21.82	−22 25 16.4	7 15.7	70.59	16 15.96
7	Do	8 47.05	25.79	16 52 28.24	4 22.35	22 32 32.1	6 49.3	70.66	16 16.09
8	Fr	8 21.26	26.30	16 56 50.59	4 22.86	22 39 21.4	6 22.7	70.73	16 16.21
9	Sa	7 54.96	26.78	17 1 13.45	4 23.33	22 45 44.1	5 55.9	70.80	16 16.33
10	St	7 28.18	27.23	17 5 36.78	4 23.79	22 51 40.0	5 28.9	70.86	16 16.44
11	Mo	7 0.95	27.65	17 10 0.57	4 24.21	22 57 8.9	5 1.6	70.92	16 16.55
12	Di	− 6 33.30	28.05	17 14 24.78	4 24.61	−23 2 10.5	4 34.3	70.97	16 16.65
13	Mi	6 5.25	28.40	17 18 49.39	4 24.96	23 6 44.8	4 6.7	71.02	16 16.75
14	Do	5 36.85	28.74	17 23 14.35	4 25.29	23 10 51.5	3 38.9	71.06	16 16.85
15	Fr	5 8.11	29.02	17 27 39.64	4 25.58	23 14 30.4	3 11.1	71.10	16 16.94
16	Sa	4 39.09	29.27	17 32 5.22	4 25.84	23 17 41.5	2 43.2	71.14	16 17.03
17	St	4 9.82	29.48	17 36 31.06	4 26.04	23 20 24.7	2 15.0	71.17	16 17.11
18	Mo	− 3 40.34	29.66	17 40 57.10	4 26.22	−23 22 39.7	1 47.0	71.19	16 17.20
19	Di	3 10.68	29.79	17 45 23.32	4 26.35	23 24 26.7	1 18.7	71.21	16 17.27
20	Mi	2 40.89	29.89	17 49 49.67	4 26.44	23 25 45.4	0 50.5	71.23	16 17.35
21	Do	2 11.00	29.94	17 54 16.11	4 26.50	23 26 35.9	0 22.2	71.24	16 17.42
22	Fr	1 41.06	29.96	17 58 42.61	4 26.52	23 26 58.1	0 6.1	71.25	16 17.49
23	Sa	1 11.10	29.95	18 3 9.13	4 26.51	23 26 52.0	0 34.3	71.26	16 17.55
24	St	− 0 41.15	29.90	18 7 35.64	4 26.46	−23 26 17.7	1 2.6	71.26	16 17.61
25	Mo	− 0 11.25	29.82	18 12 2.10	4 26.37	23 25 15.1	1 30.8	71.25	16 17.66
26	Di	+ 0 18.57	29.70	18 16 28.47	4 26.26	23 23 44.3	1 59.0	71.24	16 17.71
27	Mi	0 48.27	29.56	18 20 54.73	4 26.12	23 21 45.3	2 27.1	71.23	16 17.75
28	Do	1 17.83	29.38	18 25 20.85	4 25.94	23 19 18.2	2 55.1	71.20	16 17.79
29	Fr	1 47.21	29.17	18 29 46.79	4 25.73	23 16 23.1	3 23.0	71.18	16 17.82
30	Sa	+ 2 16.38	28.94	18 34 12.52	4 25.50	−23 13 0.1	3 50.9	71.15	16 17.84
31	St	2 45.32	28.67	18 38 38.02	4 25.23	23 9 9.2	4 18.7	71.11	16 17.86
32	Mo	+ 3 13.99		18 43 3.25		−23 4 50.5		71.08	16 17.88

Tag	Julian. Zeit	Sternzeit	Nutation in AR. langp. Gl.	Nutation in AR. kurzp. Gl.	Mittleres Äquinoktium 1933.0 Länge		Breite	log R		Aufgang	Untergang
	0h Welt-Zeit									in {+50° Breite, 0h Länge}	
1933	2427	h m s	in 0.001 s		° ′ ″	′ ″	″ in 0.01			h m	h m
Nov. 24	400.5	4 10 0.033	+543	+18	241 15 32.2	60 41.4	+10	9.994 3841	841	7 26	16 7
25	401.5	4 13 56.590	545	+14	242 16 13.6	60 42.4	+23	9.994 3000	823	7 27	16 6
26	402.5	4 17 53.148	548	+ 8	243 16 56.0	60 43.5	+35	9.994 2177	803	7 29	16 5
27	403.5	4 21 49.706	550	+ 1	244 17 39.5	60 44.5	+46	9.994 1374	782	7 30	16 4
28	404.5	4 25 46.264	553	− 6	245 18 24.0	60 45.6	+55	9.994 0592	761	7 31	16 3
29	405.5	4 29 42.822	556	− 9	246 19 9.6	60 46.6	+61	9.993 9831	738	7 33	16 3
30	406.5	4 33 39.380	+559	−11	247 19 56.2	60 47.8	+64	9.993 9093	714	7 34	16 2
Dez. 1	407.5	4 37 35.939	561	−10	248 20 44.0	60 48.9	+65	9.993 8379	689	7 36	16 2
2	408.5	4 41 32.497	564	− 7	249 21 32.9	60 50.0	+64	9.993 7690	666	7 37	16 1
3	409.5	4 45 29.055	567	− 2	250 22 22.9	60 51.1	+59	9.993 7024	641	7 38	16 1
4	410.5	4 49 25.614	570	+ 2	251 23 14.0	60 52.4	+52	9.993 6383	617	7 40	16 0
5	411.5	4 53 22.172	573	+ 6	252 24 6.4	60 53.5	+44	9.993 5766	593	7 41	16 0
6	412.5	4 57 18.731	+577	+ 9	253 24 59.9	60 54.7	+33	9.993 5173	570	7 43	15 59
7	413.5	5 1 15.289	580	+10	254 25 54.6	60 55.8	+20	9.993 4603	546	7 44	15 59
8	414.5	5 5 11.848	583	+ 9	255 26 50.4	60 57.1	+ 7	9.993 4057	523	7 45	15 59
9	415.5	5 9 8.406	586	+ 6	256 27 47.5	60 58.2	− 4	9.993 3534	502	7 46	15 59
10	416.5	5 13 4.965	590	0	257 28 45.7	60 59.4	−16	9.993 3032	481	7 47	15 58
11	417.5	5 17 1.524	594	− 7	258 29 45.1	61 0.5	−27	9.993 2551	461	7 48	15 58
12	418.5	5 20 58.083	+597	−13	259 30 45.6	61 1.7	−36	9.993 2090	442	7 49	15 58
13	419.5	5 24 54.642	600	−17	260 31 47.3	61 2.6	−43	9.993 1648	425	7 50	15 58
14	420.5	5 28 51.201	604	−18	261 32 49.9	61 3.6	−46	9.993 1223	409	7 51	15 58
15	421.5	5 32 47.760	608	−17	262 33 53.5	61 4.5	−47	9.993 0814	394	7 51	15 59
16	422.5	5 36 44.319	611	−11	263 34 58.0	61 5.2	−44	9.993 0420	379	7 52	15 59
17	423.5	5 40 40.878	614	− 3	264 36 3.2	61 5.9	−38	9.993 0041	364	7 53	15 59
18	424.5	5 44 37.437	+618	+ 6	265 37 9.1	61 6.4	−29	9.992 9677	350	7 54	15 59
19	425.5	5 48 33.996	622	+13	266 38 15.5	61 6.8	−18	9.992 9327	334	7 54	16 0
20	426.5	5 52 30.555	625	+18	267 39 22.3	61 7.1	− 5	9.992 8993	317	7 55	16 0
21	427.5	5 56 27.114	629	+18	268 40 29.4	61 7.3	+10	9.992 8676	300	7 55	16 1
22	428.5	6 0 23.673	633	+16	269 41 36.7	61 7.4	+24	9.992 8376	280	7 56	16 1
23	429.5	6 4 20.232	636	+10	270 42 44.1	61 7.6	+37	9.992 8096	259	7 56	16 2
24	430.5	6 8 16.791	+640	+ 4	271 43 51.7	61 7.7	+48	9.992 7837	237	7 57	16 2
25	431.5	6 12 13.350	644	− 3	272 44 59.4	61 7.7	+57	9.992 7600	213	7 57	16 3
26	432.5	6 16 9.909	647	− 8	273 46 7.1	61 7.7	+64	9.992 7387	188	7 58	16 3
27	433.5	6 20 6.468	651	−10	274 47 14.8	61 7.8	+67	9.992 7199	162	7 58	16 4
28	434.5	6 24 3.027	655	−10	275 48 22.6	61 7.8	+68	9.992 7037	135	7 58	16 5
29	435.5	6 27 59.586	659	− 7	276 49 30.4	61 7.9	+67	9.992 6902	108	7 58	16 6
30	436.5	6 31 56.145	+662	− 3	277 50 38.3	61 7.9	+62	9.992 6794	81	7 59	16 6
31	437.5	6 35 52.704	666	+ 2	278 51 46.2	61 7.9	+54	9.992 6713	53	7 59	16 7
32	438.5	6 39 49.263	+670	+ 6	279 52 54.1		+45	9.992 6660		7 59	16 8

0ʰ Welt-Zeit	Mittleres Äquinoktium 1933.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Jan. 0	+0.155 954	+17247	− 50	+3	−0.890 689	+ 2701	+278	+1	−0.386 324	+1172	+121	+3
1	0.173 201	17192	55	+4	0.887 988	2977	276	−3	0.385 152	1292	120	+3
2	0.190 393	17131	61	+1	0.885 011	3253	276	+1	0.383 860	1412	120	+5
3	0.207 524	17065	66	0	0.881 758	3528	275	+3	0.382 448	1531	119	+1
4	0.224 589	16993	72	−3	0.878 230	3800	272	−2	0.380 917	1649	118	−4
5	0.241 582	16917	76	0	0.874 430	4072	272	+2	0.379 268	1766	117	−4
6	+0.258 499	+16835	− 82	−1	−0.870 358	+ 4342	+270	+1	−0.377 502	+1884	+118	+2
7	0.275 334	16749	86	+1	0.866 016	4611	269	+2	0.375 618	2000	116	−3
8	0.292 083	16657	92	−2	0.861 405	4877	266	−1	0.373 618	2115	115	−3
9	0.308 740	16561	96	0	0.856 528	5143	266	+4	0.371 503	2231	116	+2
10	0.325 301	16459	102	−2	0.851 385	5407	264	+2	0.369 272	2344	113	−4
11	0.341 760	16354	105	+3	0.845 978	5668	261	−3	0.366 928	2458	114	+3
12	+0.358 114	+16242	−112	−3	−0.840 310	+ 5928	+260	+1	−0.364 470	+2571	+113	+4
13	0.374 356	16127	115	+3	0.834 382	6187	259	+5	0.361 899	2683	112	+3
14	0.390 483	16007	120	+4	0.828 195	6444	257	+2	0.359 216	2794	111	+1
15	0.406 490	15882	125	+2	0.821 751	6698	254	−5	0.356 422	2905	111	+1
16	0.422 372	15753	129	+2	0.815 053	6951	253	−4	0.353 517	3014	109	−4
17	0.438 125	15617	136	−4	0.808 102	7202	251	−2	0.350 503	3123	109	−2
18	+0.453 742	+15479	−138	+4	−0.800 900	+ 7451	+249	0	−0.347 380	+3232	+109	+1
19	0.469 221	15334	145	−1	0.793 449	7699	248	+3	0.344 148	3338	106	−5
20	0.484 555	15185	149	+2	0.785 750	7943	244	−4	0.340 810	3445	107	+2
21	0.499 740	15031	154	+3	0.777 807	8186	243	0	0.337 365	3551	106	+3
22	0.514 771	14872	159	+3	0.769 621	8427	241	+2	0.333 814	3655	104	−2
23	0.529 643	14708	164	+4	0.761 194	8664	237	−4	0.330 159	3758	103	−3
24	+0.544 351	+14539	−169	+4	−0.752 530	+ 8899	+235	−3	−0.326 401	+3860	+102	−1
25	0.558 890	14365	174	+3	0.743 631	9131	232	−2	0.322 541	3961	101	+2
26	0.573 255	14187	178	+3	0.734 500	9360	229	−1	0.318 580	4061	100	+2
27	0.587 442	14003	184	−4	0.725 140	9586	226	−1	0.314 519	4158	97	−3
28	0.601 445	13815	188	−4	0.715 554	9808	222	−4	0.310 361	4255	97	0
29	0.615 260	13623	192	−2	0.705 746	10026	218	−4	0.306 106	4350	95	−2
30	+0.628 883	+13427	−196	−1	−0.695 720	+10243	+217	+5	−0.301 756	+4443	+ 93	−4
31	0.642 310	13226	201	−2	0.685 477	10454	211	−3	0.297 313	4534	91	−4
Febr. 1	0.655 536	13023	203	+5	0.675 023	10662	208	−3	0.292 779	4625	91	+3
2	0.668 559	12815	208	+2	0.664 361	10866	204	−3	0.288 154	4714	89	+2
3	0.681 374	12603	212	+1	0.653 495	11068	202	+3	0.283 440	4800	86	−2
4	0.693 977	12389	214	+4	0.642 427	11265	197	0	0.278 640	4886	86	+4
5	+0.706 366	+12170	−219	−3	−0.631 162	+11458	+193	0	−0.273 754	+4970	+ 84	+3
6	0.718 536	11948	222	−5	0.619 704	11649	191	+4	0.268 784	5052	82	0
7	0.730 484	11722	226	−5	0.608 055	11834	185	−4	0.263 732	5133	81	0
8	0.742 206	11495	227	+4	0.596 221	12017	183	+1	0.258 599	5211	78	−3
9	0.753 701	+11263	232	+1	0.584 204	+12196	179	+1	0.253 388	+5289	78	+3
10	+0.764 964		−234	+4	−0.572 008		+174	−2	−0.248 099		+ 76	+4

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1933.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933 Febr. 10	+0.764 964	+11 029	−234	+4	−0.572 008	+12 370	+174	−2	−0.248 099	+5 365	+76	+4
11	0.775 993	10 792	237	+4	0.559 638	12 542	172	+4	0.242 734	5 440	75	+3
12	0.786 785	10 551	241	0	0.547 096	12 710	168	+5	0.237 294	5 512	72	−4
13	0.797 336	10 308	243	+3	0.534 386	12 874	164	+3	0.231 782	5 583	71	−4
14	0.807 644	10 062	246	+2	0.521 512	13 034	160	+2	0.226 199	5 653	70	−2
15	0.817 706	9 812	250	−2	0.508 478	13 191	157	+5	0.220 546	5 721	68	−4
16	+0.827 518	+ 9 560	−252	−1	−0.495 287	+13 344	+153	+5	−0.214 825	+5 787	+66	−4
17	0.837 078	9 304	256	−4	0.481 943	13 493	149	+2	0.209 038	5 852	65	0
18	0.846 382	9 045	259	−3	0.468 450	13 638	145	−1	0.203 186	5 915	63	+2
19	0.855 427	8 784	261	+3	0.454 812	13 778	140	−4	0.197 271	5 977	62	+3
20	0.864 211	8 520	264	+5	0.441 034	13 915	137	+1	0.191 294	6 036	59	−3
21	0.872 731	8 252	268	+1	0.427 119	14 047	132	−1	0.185 258	6 093	57	−5
22	+0.880 983	+ 7 983	−269	+4	−0.413 072	+14 174	+127	−1	−0.179 165	+6 148	+55	−3
23	0.888 966	7 709	274	−3	0.398 898	14 298	124	+4	0.173 017	6 202	54	+2
24	0.896 675	7 435	274	+3	0.384 600	14 415	117	−3	0.166 815	6 253	51	+1
25	0.904 110	7 157	278	−1	0.370 185	14 529	114	+2	0.160 562	6 303	50	+4
26	0.911 267	6 878	279	+3	0.355 656	14 638	109	+1	0.154 259	6 349	46	−2
27	0.918 145	6 597	281	+4	0.341 018	14 741	103	−4	0.147 910	6 394	45	+2
28	+0.924 742	+ 6 315	−282	+4	−0.326 277	+14 839	+ 98	−4	−0.141 516	+6 437	+43	+4
März 1	0.931 057	6 030	285	−2	0.311 438	14 934	95	+4	0.135 079	6 478	41	+4
2	0.937 087	5 744	286	−3	0.296 504	15 023	89	+4	0.128 601	6 516	38	+1
3	0.942 831	5 457	287	−3	0.281 481	15 108	85	+5	0.122 085	6 553	37	+3
4	0.948 288	5 169	288	−2	0.266 373	15 187	79	−2	0.115 532	6 587	34	0
5	0.953 457	4 879	290	−3	0.251 186	15 262	75	−1	0.108 945	6 619	32	0
6	+0.958 336	+ 4 590	−289	+2	−0.235 924	+15 332	+ 70	−2	−0.102 326	+6 650	+31	+4
7	0.962 926	4 298	292	−4	0.220 592	15 397	65	−2	0.095 676	6 678	28	+1
8	0.967 224	4 006	292	0	0.205 195	15 459	62	+2	0.088 998	6 704	26	+1
9	0.971 230	3 714	292	+4	0.189 736	15 514	55	−5	0.082 294	6 729	25	+2
10	0.974 944	3 421	293	+2	0.174 222	15 566	52	−1	0.075 565	6 751	22	−4
11	0.978 365	3 127	294	+1	0.158 656	15 613	47	−1	0.068 814	6 771	20	−5
12	+0.981 492	+ 2 833	−294	+4	−0.143 043	+15 656	+ 43	+2	−0.062 043	+6 790	+19	−1
13	0.984 325	2 539	294	+5	0.127 387	15 695	39	+5	0.055 253	6 807	17	−1
14	0.986 864	2 243	296	−1	0.111 692	15 729	34	+1	0.048 446	6 821	14	−4
15	0.989 107	1 947	296	−1	0.095 963	15 758	29	−2	0.041 625	6 835	14	+2
16	0.991 054	1 650	297	0	0.080 205	15 784	26	+3	0.034 790	6 846	11	−1
17	0.992 704	1 354	296	+5	0.064 421	15 805	21	+1	0.027 944	6 855	9	−3
18	+0.994 058	+ 1 056	−298	−1	−0.048 616	+15 820	+ 15	−4	−0.021 089	+6 862	+ 7	−5
19	0.995 114	757	299	−5	0.032 796	15 832	12	0	0.014 227	6 867	5	−5
20	0.995 871	459	298	−1	0.016 964	15 838	6	−2	0.007 360	6 870	3	−2
21	0.996 330	+ 160	299	−3	−0.001 126	15 840	+ 2	+2	−0.000 490	6 871	+ 1	0
22	0.996 490	− 139	299	−4	+0.014 714	+15 837	− 3	+3	+0.006 381	+6 870	− 1	−1
23	+0.996 351		−299	−4	+0.030 551		− 8	+2	+0.013 251		− 4	−5

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1933.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
März 23	+0.996 351	− 438	−299	−4	+0.030 551	+15 829	− 8	+2	+0.013 251	+6866	− 4	−5
24	0.995 913	737	299	−3	0.046 380	15 815	14	−1	0.020 117	6860	6	−3
25	0.995 176	1 035	298	+1	0.062 195	15 797	18	+3	0.026 977	6852	8	+1
26	0.994 141	1 332	297	+2	0.077 992	15 774	23	+4	0.033 829	6843	9	+4
27	0.992 809	1 630	298	−4	0.093 766	15 746	28	+2	0.040 672	6830	13	−4
28	0.991 179	1 926	296	0	0.109 512	15 712	34	−2	0.047 502	6815	15	−4
29	+0.989 253	− 2 221	−295	+2	+0.125 224	+15 674	− 38	+1	+0.054 317	+6799	−16	−1
30	0.987 032	2 515	294	+3	0.140 898	15 632	42	+4	0.061 116	6780	19	−4
31	0.984 517	2 807	292	+5	0.156 530	15 584	48	−2	0.067 896	6759	21	−4
April 1	0.981 710	3 098	291	+1	0.172 114	15 531	53	−4	0.074 655	6736	23	−2
2	0.978 612	3 389	291	−5	0.187 645	15 475	56	+2	0.081 391	6712	24	+2
3	0.975 223	3 677	288	0	0.203 120	15 413	62	−1	0.088 103	6685	27	−2
4	+0.971 546	− 3 963	−286	+2	+0.218 533	+15 347	− 66	+1	+0.094 788	+6656	−29	−5
5	0.967 583	4 249	286	−3	0.233 880	15 278	69	+4	0.101 444	6625	31	−4
6	0.963 334	4 531	282	+3	0.249 158	15 202	76	−4	0.108 069	6594	31	+2
7	0.958 803	4 813	282	−1	0.264 360	15 124	78	+2	0.114 663	6559	35	−5
8	0.953 990	5 092	279	+1	0.279 484	15 041	83	0	0.121 222	6523	36	−5
9	0.948 898	5 370	278	−1	0.294 525	14 954	87	+1	0.127 745	6485	38	−4
10	+0.943 528	− 5 645	−275	+3	+0.309 479	+14 864	− 90	+4	+0.134 230	+6447	−38	+2
11	0.937 883	5 919	274	0	0.324 343	14 769	95	0	0.140 677	6405	42	−4
12	0.931 964	6 192	273	−4	0.339 112	14 671	98	+1	0.147 082	6363	42	+1
13	0.925 772	6 462	270	−1	0.353 783	14 568	103	−4	0.153 445	6318	45	0
14	0.919 310	6 732	270	−4	0.368 351	14 461	107	−4	0.159 763	6273	45	+5
15	0.912 578	6 998	266	+4	0.382 812	14 351	110	+3	0.166 036	6225	48	+1
16	+0.905 580	− 7 263	−265	+1	+0.397 163	+14 237	−114	+4	+0.172 261	+6175	−50	0
17	0.898 317	7 527	264	−4	0.411 400	14 117	120	−2	0.178 436	6124	51	+3
18	0.890 790	7 788	261	−2	0.425 517	13 995	122	+3	0.184 560	6071	53	+1
19	0.883 002	8 048	260	−4	0.439 512	13 867	128	−3	0.190 631	6015	56	−5
20	0.874 954	8 303	255	+4	0.453 379	13 735	132	−1	0.196 646	5958	57	−2
21	0.866 651	8 558	255	−2	0.467 114	13 600	135	+5	0.202 604	5899	59	+1
22	+0.858 093	− 8 809	−251	0	+0.480 714	+13 460	−140	+3	+0.208 503	+5839	−60	+5
23	0.849 284	9 058	249	−2	0.494 174	13 316	144	+1	0.214 342	5776	63	+1
24	0.840 226	9 303	245	+1	0.507 490	13 168	148	0	0.220 118	5712	64	+1
25	0.830 923	9 546	243	−3	0.520 658	13 015	153	−2	0.225 830	5645	67	−2
26	0.821 377	9 785	239	−3	0.533 673	12 860	155	+5	0.231 475	5578	67	+5
27	0.811 592	10 022	237	−5	0.546 533	12 701	159	+4	0.237 053	5509	69	+4
28	+0.801 570	−10 254	−232	+2	+0.559 234	+12 537	−164	−3	+0.242 562	+5438	−71	0
29	0.791 316	10 483	229	+2	0.571 771	12 370	167	−3	0.248 000	5365	73	−5
30	0.780 833	10 709	226	−1	0.584 141	12 200	170	−2	0.253 365	5291	74	−4
Mai 1	0.770 124	10 931	222	−1	0.596 341	12 026	174	−3	0.258 656	5215	76	−3
2	0.759 193	−11 150	219	−3	0.608 367	+11 849	177	−1	0.263 871	+5139	76	+4
3	+0.748 043		−215	0	+0.620 216		−180	+1	+0.269 010		−78	+1

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit		Mittleres Äquinoktium 1933.0											
		X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933													
Mai	3	+0.748 043	−11 365	−215	0	+0.620 216	+11 669	−180	+1	+0.269 010	+5 061	− 78	+1
	4	0.736 678	11 576	211	+3	0.631 885	11 486	183	+2	0.274 071	4 981	80	−4
	5	0.725 102	11 783	207	+5	0.643 371	11 300	186	+3	0.279 052	4 900	81	−2
	6	0.713 319	11 987	204	+2	0.654 671	11 111	189	+3	0.283 952	4 819	81	+4
	7	0.701 332	12 187	200	+2	0.665 782	10 920	191	+3	0.288 771	4 736	83	+1
	8	0.689 145	12 384	197	+1	0.676 702	10 725	195	−1	0.293 507	4 651	85	−3
	9	+0.676 761	−12 576	−192	+4	+0.687 427	+10 529	−196	+5	+0.298 158	+4 567	− 84	+2
	10	0.664 185	12 767	191	−4	0.697 956	10 330	199	+3	0.302 725	4 480	87	−3
	11	0.651 418	12 952	185	+2	0.708 286	10 128	202	−1	0.307 205	4 393	87	−1
	12	0.638 466	13 136	184	−3	0.718 414	9 923	205	−4	0.311 598	4 304	89	−3
	13	0.625 330	13 315	179	+3	0.728 337	9 716	207	−2	0.315 902	4 215	89	0
	14	0.612 015	13 491	176	+3	0.738 053	9 506	210	−1	0.320 117	4 123	92	−4
	15	+0.598 524	−13 663	−172	+4	+0.747 559	+ 9 293	−213	−1	+0.324 240	+4 032	− 91	+3
	16	0.584 861	13 832	169	+2	0.756 852	9 078	215	+2	0.328 272	3 938	94	−2
	17	0.571 029	13 996	164	+4	0.765 930	8 860	218	+1	0.332 210	3 843	95	−2
	18	0.557 033	14 157	161	−2	0.774 790	8 638	222	−3	0.336 053	3 748	95	+1
	19	0.542 876	14 314	157	−5	0.783 428	8 415	223	+3	0.339 801	3 650	98	−4
	20	0.528 562	14 467	153	−4	0.791 843	8 189	226	+2	0.343 451	3 552	98	+1
	21	+0.514 095	−14 614	−147	+4	+0.800 032	+ 7 960	−229	−1	+0.347 003	+3 453	− 99	+3
	22	0.499 481	14 758	144	+1	0.807 992	7 729	231	0	0.350 456	3 353	100	+2
	23	0.484 723	14 897	139	+2	0.815 721	7 496	233	0	0.353 809	3 251	102	−2
	24	0.469 826	15 031	134	+1	0.823 217	7 260	236	−4	0.357 060	3 149	102	+1
	25	0.454 795	15 162	131	−5	0.830 477	7 022	238	−3	0.360 209	3 046	103	+1
	26	0.439 633	15 287	125	0	0.837 499	6 783	239	+3	0.363 255	2 942	104	−2
	27	+0.424 346	−15 407	−120	+1	+0.844 282	+ 6 542	−241	+4	+0.366 197	+2 837	−105	−5
	28	0.408 939	15 524	117	−4	0.850 824	6 298	244	0	0.369 034	2 731	106	−5
	29	0.393 415	15 634	110	+2	0.857 122	6 054	244	+5	0.371 765	2 625	106	−1
	30	0.377 781	15 741	107	−2	0.863 176	5 808	246	+4	0.374 390	2 518	107	+1
	31	0.362 040	15 842	101	+1	0.868 984	5 561	247	+3	0.376 908	2 411	107	+5
Juni	1	0.346 198	15 939	97	0	0.874 545	5 311	250	−4	0.379 319	2 303	108	+4
	2	+0.330 259	−16 031	− 92	+1	+0.879 856	+ 5 062	−249	+1	+0.381 622	+2 195	−108	+4
	3	0.314 228	16 118	87	+1	0.884 918	4 811	251	−2	0.383 817	2 086	109	+2
	4	0.298 110	16 201	83	−1	0.889 729	4 559	252	−3	0.385 903	1 977	109	+4
	5	0.281 909	16 280	79	−1	0.894 288	4 307	252	−1	0.387 880	1 868	109	+4
	6	0.265 629	16 353	73	+5	0.898 595	4 053	254	−4	0.389 748	1 758	110	0
	7	0.249 276	16 422	69	+3	0.902 648	3 799	254	0	0.391 506	1 648	110	0
	8	+0.232 854	−16 488	− 66	−3	+0.906 447	+ 3 545	−254	+4	+0.393 154	+1 538	−110	0
	9	0.216 366	16 550	62	−3	0.909 992	3 289	256	−1	0.394 692	1 427	111	−3
	10	0.199 816	16 606	56	+4	0.913 281	3 032	257	−3	0.396 119	1 315	112	−5
	11	0.183 210	16 659	53	+1	0.916 313	2 775	257	0	0.397 434	1 205	110	+3
	12	0.166 551	−16 707	48	+3	0.919 088	+ 2 516	259	−2	0.398 639	+1 092	113	−4
	13	+0.149 844		− 44	+2	+0.921 604		−259	+1	+0.399 731		−113	−3

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1933.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Juni 13	+0.149 844	−16751	− 44	+2	+0.921 604	+2257	−259	+1	+0.399 731	+ 979	−113	−3
14	0.133 093	16790	39	+4	0.923 861	1996	261	−2	0.400 710	867	112	+2
15	0.116 303	16824	34	+4	0.925 857	1736	260	+3	0.401 577	753	114	−1
16	0.099 479	16854	30	−1	0.927 593	1473	263	−2	0.402 330	640	113	+2
17	0.082 625	16879	25	−2	0.929 066	1211	262	+4	0.402 970	526	114	−1
18	0.065 746	16899	20	0	0.930 277	948	263	+4	0.403 496	411	115	−3
19	+0.048 847	−16913	− 14	+4	+0.931 225	+ 685	−263	+4	+0.403 907	+ 297	−114	+1
20	0.031 934	16923	10	0	0.931 910	421	264	0	0.404 204	183	114	+1
21	+0.015 011	16928	− 5	−4	0.932 331	+ 156	265	−2	0.404 387	+ 68	115	−4
22	−0.001 917	16928	0	−5	0.932 487	− 107	263	+5	0.404 455	− 47	115	−5
23	0.018 845	16923	+ 5	−4	0.932 380	371	264	+3	0.404 408	162	115	−3
24	0.035 768	16912	11	−1	0.932 009	635	264	+2	0.404 246	276	114	+4
25	−0.052 680	−16897	+ 15	−3	+0.931 374	− 898	−263	+3	+0.403 970	− 390	−114	+5
26	0.069 577	16876	21	−2	0.930 476	1162	264	−2	0.403 580	505	115	+1
27	0.086 453	16851	25	−5	0.929 314	1424	262	0	0.403 075	618	113	+4
28	0.103 304	16821	30	−3	0.927 890	1687	263	−4	0.402 457	732	114	−2
29	0.120 125	16785	36	+3	0.926 203	1947	260	+2	0.401 725	846	114	−2
30	0.136 910	16744	41	+4	0.924 256	2208	261	−5	0.400 879	958	112	+5
Juli 1	−0.153 654	−16700	+ 44	−3	+0.922 048	−2468	−260	−4	+0.399 921	−1071	−113	+2
2	0.170 354	16651	49	−1	0.919 580	2725	257	+4	0.398 850	1182	111	+5
3	0.187 005	16596	55	+5	0.916 855	2983	258	−1	0.397 668	1294	112	0
4	0.203 601	16538	58	+2	0.913 872	3239	256	+1	0.396 374	1405	111	+1
5	0.220 139	16475	63	+5	0.910 633	3494	255	+2	0.394 969	1515	110	+4
6	0.236 614	16408	67	+4	0.907 139	3747	253	+5	0.393 454	1625	110	+3
7	−0.253 022	−16337	+ 71	+1	+0.903 392	−4000	−253	0	+0.391 829	−1734	−109	+3
8	0.269 359	16262	75	−2	0.899 392	4252	252	−2	0.390 095	1844	110	−2
9	0.285 621	16183	79	−3	0.895 140	4503	251	−1	0.388 251	1952	108	+3
10	0.301 804	16099	84	0	0.890 637	4752	249	+3	0.386 299	2061	109	0
11	0.317 903	16011	88	−2	0.885 885	5002	250	−2	0.384 238	2168	107	+4
12	0.333 914	15919	92	−4	0.880 883	5249	247	+4	0.382 070	2276	108	0
13	−0.349 833	−15822	+ 97	−2	+0.875 634	−5495	−246	+4	+0.379 794	−2383	−107	0
14	0.365 655	15720	102	0	0.870 139	5742	247	−3	0.377 411	2490	107	−1
15	0.381 375	15615	105	−4	0.864 397	5985	243	+4	0.374 921	2596	106	+2
16	0.396 990	15504	111	+2	0.858 412	6228	243	−1	0.372 325	2701	105	+4
17	0.412 494	15388	116	+5	0.852 184	6470	242	−2	0.369 624	2806	105	+1
18	0.427 882	15268	120	+3	0.845 714	6709	239	+4	0.366 818	2910	104	+1
19	−0.443 150	−15144	+124	0	+0.839 005	−6947	−238	+3	+0.363 908	−3013	−103	+2
20	0.458 294	15014	130	+3	0.832 058	7182	235	+5	0.360 895	3116	103	−1
21	0.473 308	14881	133	−2	0.824 876	7417	235	−1	0.357 779	3217	101	0
22	0.488 189	14743	138	0	0.817 459	7648	231	+3	0.354 562	3318	101	−4
23	0.502 932	−14599	144	+4	0.809 811	−7878	230	−2	0.351 244	−3418	100	−3
24	−0.517 531		+146	−4	+0.801 933		−228	−4	+0.347 826		− 98	0

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1933.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Juli 24	−0.517 531	−14 453	+146	−4	+0.801 933	− 8 106	−228	−4	+0.347 826	−3 516	−98	0
25	0.531 984	14 301	152	0	0.793 827	8 330	224	0	0.344 310	3 614	98	−4
26	0.546 285	14 145	156	−1	0.785 497	8 553	223	−5	0.340 696	3 711	97	−3
27	0.560 430	13 986	159	−3	0.776 944	8 773	220	−4	0.336 985	3 805	94	+3
28	0.574 416	13 821	165	+4	0.768 171	8 989	216	+1	0.333 180	3 900	95	−3
29	0.588 237	13 653	168	+1	0.759 182	9 204	215	−4	0.329 280	3 992	92	+2
30	−0.601 890	−13 482	+171	−3	+0.749 978	− 9 415	−211	−1	+0.325 288	−4 084	−92	−1
31	0.615 372	13 306	176	0	0.740 563	9 623	208	−1	0.321 204	4 174	90	+1
Aug. 1	0.628 678	13 128	178	−4	0.730 940	9 829	206	−5	0.317 030	4 263	89	+1
2	0.641 806	12 946	182	−1	0.721 111	10 032	203	−4	0.312 767	4 351	88	+1
3	0.654 752	12 760	186	+3	0.711 079	10 231	199	0	0.308 416	4 437	86	+4
4	0.667 512	12 571	189	+3	0.700 848	10 429	198	−5	0.303 979	4 522	85	+2
5	−0.680 083	−12 379	+192	0	+0.690 419	−10 623	−194	0	+0.299 457	−4 607	−85	−4
6	0.692 462	12 185	194	−5	0.679 796	10 814	191	+3	0.294 850	4 690	83	−2
7	0.704 647	11 986	199	+2	0.668 982	11 004	190	−2	0.290 160	4 772	82	0
8	0.716 633	11 784	202	+3	0.657 978	11 190	186	+1	0.285 388	4 853	81	+1
9	0.728 417	11 579	205	+3	0.646 788	11 373	183	+2	0.280 535	4 932	79	+4
10	0.739 996	11 370	209	+5	0.635 415	11 554	181	−2	0.275 603	5 011	79	0
11	−0.751 366	−11 158	+212	+3	+0.623 861	−11 733	−179	−4	+0.270 592	−5 088	−77	0
12	0.762 524	10 942	216	+3	0.612 128	11 907	174	+4	0.265 504	5 165	77	−4
13	0.773 466	10 723	219	0	0.600 221	12 079	172	+2	0.260 339	5 239	74	+2
14	0.784 189	10 501	222	−2	0.588 142	12 247	168	+2	0.255 100	5 312	73	+2
15	0.794 690	10 274	227	+2	0.575 895	12 413	166	−3	0.249 788	5 384	72	0
16	0.804 964	10 046	228	−4	0.563 482	12 575	162	−2	0.244 404	5 455	71	−1
17	−0.815 010	− 9 813	+233	+2	+0.550 907	−12 733	−158	−1	+0.238 949	−5 523	−68	+4
18	0.824 823	9 576	237	+5	0.538 174	12 888	155	−4	0.233 426	5 590	67	+1
19	0.834 399	9 338	238	−4	0.525 286	13 040	152	−4	0.227 836	5 657	67	−5
20	0.843 737	9 096	242	−3	0.512 246	13 186	146	+3	0.222 179	5 720	63	+2
21	0.852 833	8 851	245	−2	0.499 060	13 331	145	−4	0.216 459	5 782	62	0
22	0.861 684	8 603	248	+1	0.485 729	13 469	138	+3	0.210 677	5 843	61	−4
23	−0.870 287	− 8 352	+251	+4	+0.472 260	−13 605	−136	−4	+0.204 834	−5 902	−59	−3
24	0.878 639	8 098	254	+3	0.458 655	13 737	132	−4	0.198 932	5 959	57	0
25	0.886 737	7 843	255	−4	0.444 918	13 864	127	+2	0.192 973	6 013	54	+5
26	0.894 580	7 585	258	−3	0.431 054	13 986	122	+5	0.186 960	6 066	53	+1
27	0.902 165	7 325	260	−2	0.417 068	14 105	119	+1	0.180 894	6 118	52	−5
28	0.909 490	7 063	262	0	0.402 963	14 219	114	+1	0.174 776	6 168	50	−4
29	−0.916 553	− 6 798	+265	+4	+0.388 744	−14 330	−111	−5	+0.168 608	−6 215	−47	+3
30	0.923 351	6 533	265	−3	0.374 414	14 436	106	−3	0.162 393	6 260	45	+3
31	0.929 884	6 266	267	−4	0.359 978	14 538	102	−1	0.156 133	6 305	45	−5
Sept. 1	0.936 150	5 997	269	−2	0.345 440	14 636	98	0	0.149 828	6 348	43	−5
2	0.942 147	− 5 726	271	−1	0.330 804	−14 730	94	−1	0.143 480	−6 388	40	0
3	−0.947 873		+271	−5	+0.316 074		− 91	−3	+0.137 092		−39	−2

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0^h Welt-Zeit	Mittleres Äquinoktium 1933.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933 Sept. 3	−0.947 873	−5 455	+271	−5	+0.316 074	−14 821	−91	−3	+0.137 092	−6 427	−39	−2
4	0.953 328	5 181	274	+1	0.301 253	14 906	85	+4	0.130 665	6 465	38	−5
5	0.958 509	4 905	276	+2	0.286 347	14 989	83	−1	0.124 200	6 501	36	−4
6	0.963 414	4 629	276	−4	0.271 358	15 068	79	−2	0.117 699	6 535	34	−1
7	0.968 043	4 351	278	−3	0.256 290	15 142	74	+1	0.111 164	6 567	32	+1
8	0.972 394	4 070	281	+3	0.241 148	15 213	71	−2	0.104 597	6 598	31	−1
9	−0.976 464	−3 788	+282	+2	+0.225 935	−15 279	−66	−1	+0.097 999	−6 627	−29	−2
10	0.980 252	3 505	283	−1	0.210 656	15 342	63	−3	0.091 372	6 654	27	−2
11	0.983 757	3 220	285	0	0.195 314	15 399	57	+3	0.084 718	6 680	26	−3
12	0.986 977	2 934	286	0	0.179 915	15 453	54	0	0.078 038	6 702	22	+3
13	0.989 911	2 646	288	+3	0.164 462	15 502	49	+2	0.071 336	6 724	22	−4
14	0.992 557	2 356	290	+4	0.148 960	15 546	44	+3	0.064 612	6 744	20	−5
15	−0.994 913	−2 067	+289	−4	+0.133 414	−15 587	−41	−2	+0.057 868	−6 761	−17	−1
16	0.996 980	1 775	292	+1	0.117 827	15 622	35	+2	0.051 107	6 777	16	−1
17	0.998 755	1 483	292	−1	0.102 205	15 653	31	+1	0.044 330	6 789	12	+4
18	1.000 238	1 189	294	0	0.086 552	15 678	25	+4	0.037 541	6 801	12	−4
19	1.001 427	896	293	−5	0.070 874	15 700	22	−2	0.030 740	6 811	10	−5
20	1.002 323	601	295	+1	0.055 174	15 716	16	0	0.023 929	6 817	6	+3
21	−1.002 924	− 305	+296	+3	+0.039 458	−15 727	−11	0	+0.017 112	−6 822	− 5	+2
22	1.003 229	− 11	294	−5	0.023 731	15 734	− 7	−2	0.010 290	6 824	2	+5
23	1.003 240	+ 285	296	−1	+0.007 997	15 734	0	+4	+0.003 466	6 825	− 1	+2
24	1.002 955	580	295	−3	−0.007 737	15 731	+ 3	−3	−0.003 359	6 823	+ 2	+4
25	1.002 375	874	294	−4	0.023 468	15 723	8	−5	0.010 182	6 819	4	+3
26	1.001 501	1 169	295	+4	0.039 191	15 710	13	−3	0.017 001	6 813	6	0
27	−1.000 332	+1 463	+294	+5	−0.054 901	−15 692	+18	−1	−0.023 814	−6 806	+ 7	−5
28	0.998 869	1 757	294	+4	0.070 593	15 670	22	−2	0.030 620	6 796	10	−1
29	0.997 112	2 049	292	−3	0.086 263	15 643	27	−1	0.037 416	6 784	12	−1
30	0.995 063	2 341	292	−3	0.101 906	15 613	30	−4	0.044 200	6 771	13	−4
Okt. 1	0.992 722	2 632	291	−3	0.117 519	15 576	37	+4	0.050 971	6 756	15	−2
2	0.990 090	2 923	291	0	0.133 095	15 537	39	−3	0.057 727	6 738	18	+3
3	−0.987 167	+3 213	+290	+2	−0.148 632	−15 493	+44	−3	−0.064 465	−6 719	+19	0
4	0.983 954	3 503	290	+5	0.164 125	15 445	48	−4	0.071 184	6 699	20	−4
5	0.980 451	3 792	289	+3	0.179 570	15 393	52	−3	0.077 883	6 676	23	+1
6	0.976 659	4 080	288	−1	0.194 963	15 335	58	+4	0.084 559	6 651	25	+3
7	0.972 579	4 367	287	−2	0.210 298	15 274	61	0	0.091 210	6 625	26	0
8	0.968 212	4 654	287	+2	0.225 572	15 209	65	−1	0.097 835	6 596	29	+1
9	−0.963 558	+4 940	+286	+3	−0.240 781	−15 138	+71	+5	−0.104 431	−6 566	+30	−4
10	0.958 618	5 225	285	+3	0.255 919	15 063	75	+4	0.110 997	6 534	32	−5
11	0.953 393	5 509	284	+3	0.270 982	14 983	80	+3	0.117 531	6 500	34	−3
12	0.947 884	5 792	283	+4	0.285 965	14 900	83	−5	0.124 031	6 463	37	+2
13	0.942 092	+6 074	282	+4	0.300 865	−14 812	88	−5	0.130 494	−6 425	38	−1
14	−0.936 018		+280	−1	−0.315 677		+94	0	−0.136 919		+41	0

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1933.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Okt. 14	−0.936 018	+ 6354	+280	−1	−0.315 677	−14718	+ 94	0	−0.136 919	−6384	+ 41	0
15	0.929 664	6633	279	−3	0.330 395	14621	97	−3	0.143 303	6342	42	−4
16	0.923 031	6910	277	−5	0.345 016	14517	104	+4	0.149 645	6298	44	−4
17	0.916 121	7186	276	−3	0.359 533	14411	106	−3	0.155 943	6251	47	+2
18	0.908 935	7460	274	−3	0.373 944	14298	113	+3	0.162 194	6202	49	+4
19	0.901 475	7731	271	−5	0.388 242	14181	117	0	0.168 396	6151	51	+3
20	−0.893 744	+ 8001	+270	0	−0.402 423	−14060	+121	−4	−0.174 547	−6098	+ 53	0
21	0.885 743	8268	267	−1	0.416 483	13934	126	−3	0.180 645	6044	54	−4
22	0.877 475	8532	264	−2	0.430 417	13803	131	+1	0.186 689	5986	58	+2
23	0.868 943	8794	262	−1	0.444 220	13667	136	+4	0.192 675	5928	58	−3
24	0.860 149	9052	258	−5	0.457 887	13529	138	−3	0.198 603	5867	61	−1
25	0.851 097	9308	256	−1	0.471 416	13385	144	+3	0.204 470	5805	62	−4
26	−0.841 789	+ 9561	+253	0	−0.484 801	−13237	+148	+4	−0.210 275	−5741	+ 64	−3
27	0.832 228	9810	249	−3	0.498 038	13086	151	−1	0.216 016	5675	66	−1
28	0.822 418	10058	248	+3	0.511 124	12931	155	−3	0.221 691	5609	66	−4
29	0.812 360	10301	243	−3	0.524 055	12773	158	−4	0.227 300	5539	70	+5
30	0.802 059	10542	241	0	0.536 828	12610	163	+3	0.232 839	5468	71	+4
31	0.791 517	10780	238	+2	0.549 438	12443	167	+4	0.238 307	5397	71	−3
Nov. 1	−0.780 737	+11015	+235	+2	−0.561 881	−12275	+168	−4	−0.243 704	−5324	+ 73	−1
2	0.769 722	11247	232	+2	0.574 156	12101	174	+4	0.249 028	5248	76	+4
3	0.758 475	11476	229	+2	0.586 257	11924	177	+5	0.254 276	5172	76	0
4	0.746 999	11702	226	+4	0.598 181	11743	181	+4	0.259 448	5094	78	+1
5	0.735 297	11925	223	+5	0.609 924	11560	183	−3	0.264 542	5014	80	+4
6	0.723 372	12145	220	+5	0.621 484	11372	188	0	0.269 556	4932	82	+3
7	−0.711 227	+12362	+217	+2	−0.632 856	−11181	+191	0	−0.274 488	−4850	+ 82	−4
8	0.698 865	12574	212	−5	0.644 037	10986	195	+2	0.279 338	4766	84	−3
9	0.686 291	12784	210	0	0.655 023	10787	199	+3	0.284 104	4679	87	+3
10	0.673 507	12991	207	+3	0.665 810	10586	201	−3	0.288 783	4592	87	−3
11	0.660 516	13193	202	−1	0.676 396	10380	206	+1	0.293 375	4503	89	−4
12	0.647 323	13393	200	+3	0.686 776	10171	209	0	0.297 878	4412	91	−2
13	−0.633 930	+13587	+194	−3	−0.696 947	−9959	+212	−1	−0.302 290	−4320	+ 92	−3
14	0.620 343	13779	192	+4	0.706 906	9742	217	+4	0.306 610	4226	94	−2
15	0.606 564	13967	188	+4	0.716 648	9523	219	+1	0.310 836	4131	95	−2
16	0.592 597	14149	182	−4	0.726 171	9300	223	+3	0.314 967	4034	97	+1
17	0.578 448	14327	178	−2	0.735 471	9073	227	+5	0.319 001	3935	99	+3
18	0.564 121	14502	175	+4	0.744 544	8843	230	+2	0.322 936	3836	99	−1
19	−0.549 619	+14670	+168	−1	−0.753 387	− 8611	+232	−4	−0.326 772	−3734	+102	+2
20	0.534 949	14835	165	+4	0.761 998	8376	235	−5	0.330 506	3633	101	−4
21	0.520 114	14994	159	+1	0.770 374	8137	239	−1	0.334 139	3529	104	+2
22	0.505 120	15148	154	0	0.778 511	7897	240	−5	0.337 668	3424	105	+3
23	0.489 972	+15298	150	+2	0.786 408	− 7654	243	−4	0.341 092	−3319	105	−2
24	−0.474 674		+144	−1	−0.794 062		+245	−4	−0.344 411		+106	−2

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1933.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Nov. 24	−0.474 674	+15 442	+144	−1	−0.794 062	−7 409	+245	−4	−0.344 411	−3 213	+106	−2
25	0.459 232	15 582	140	+2	0.801 471	7 162	247	−2	0.347 624	3 105	108	+1
26	0.443 650	15 717	135	+2	0.808 633	6 912	250	+2	0.350 729	2 998	107	−5
27	0.427 933	15 848	131	+3	0.815 545	6 661	251	−1	0.353 727	2 889	109	0
28	0.412 085	15 972	124	−4	0.822 206	6 408	253	−2	0.356 616	2 779	110	+3
29	0.396 113	16 094	122	+3	0.828 614	6 154	254	−3	0.359 395	2 669	110	+2
30	−0.380 019	+16 210	+116	0	−0.834 768	−5 896	+258	+4	−0.362 064	−2 557	+112	+5
Dez. 1	0.363 809	16 321	111	−2	0.840 664	5 638	258	−1	0.364 621	2 445	112	+1
2	0.347 488	16 429	108	+2	0.846 302	5 378	260	−2	0.367 066	2 333	112	−3
3	0.331 059	16 530	101	−5	0.851 680	5 116	262	−2	0.369 399	2 219	114	−1
4	0.314 529	16 627	97	−2	0.856 796	4 852	264	−1	0.371 618	2 105	114	−4
5	0.297 902	16 720	93	+4	0.861 648	4 587	265	−2	0.373 723	1 991	114	−5
6	−0.281 182	+16 808	+ 88	+5	−0.866 235	−4 320	+267	−2	−0.375 714	−1 874	+117	+4
7	0.264 374	16 891	83	+3	0.870 555	4 052	268	−3	0.377 588	1 758	116	0
8	0.247 483	16 968	77	−2	0.874 607	3 782	270	+1	0.379 346	1 641	117	0
9	0.230 515	17 041	73	0	0.878 389	3 510	272	+3	0.380 987	1 523	118	+1
10	0.213 474	17 109	68	+1	0.881 899	3 237	273	0	0.382 510	1 405	118	−1
11	0.196 365	17 171	62	−2	0.885 136	2 963	274	−4	0.383 915	1 285	120	+2
12	−0.179 194	+17 229	+ 58	0	−0.888 099	−2 688	+275	−4	−0.385 200	−1 166	+119	−4
13	0.161 965	17 280	51	−5	0.890 787	2 410	278	+3	0.386 366	1 046	120	−4
14	0.144 685	17 326	46	−1	0.893 197	2 133	277	−2	0.387 412	925	121	−2
15	0.127 359	17 368	42	+4	0.895 330	1 853	280	+4	0.388 337	804	121	−1
16	0.109 991	17 402	34	−4	0.897 183	1 573	280	+3	0.389 141	682	122	+3
17	0.092 589	17 431	29	−3	0.898 756	1 292	281	+3	0.389 823	560	122	+4
18	−0.075 158	+17 454	+ 23	−2	−0.900 048	−1 011	+281	0	−0.390 383	− 438	+122	+4
19	0.057 704	17 471	17	−1	0.901 059	730	281	−1	0.390 821	315	123	+4
20	0.040 233	17 483	12	+2	0.901 789	448	282	+4	0.391 136	194	121	−3
21	0.022 750	17 489	+ 6	0	0.902 237	− 166	282	+4	0.391 330	− 71	123	+2
22	−0.005 261	17 488	− 1	−5	0.902 403	+ 115	281	−1	0.391 401	+ 50	121	−3
23	+0.012 227	17 483	5	−1	0.902 288	395	280	−4	0.391 351	172	122	+2
24	+0.029 710	+17 472	− 11	−2	−0.901 893	+ 677	+282	+3	−0.391 179	+ 294	+122	+4
25	0.047 182	17 456	16	−1	0.901 216	956	279	−5	0.390 885	415	121	+2
26	0.064 638	17 434	22	−2	0.900 260	1 235	279	−4	0.390 470	536	121	+2
27	0.082 072	17 408	26	+1	0.899 025	1 515	280	+1	0.389 934	657	121	+2
28	0.099 480	17 376	32	−2	0.897 510	1 792	277	−4	0.389 277	777	120	+1
29	0.116 856	17 339	37	−4	0.895 718	2 071	279	+3	0.388 500	898	121	+5
30	+0.134 195	+17 296	− 43	−5	−0.893 647	+2 347	+276	−5	−0.387 602	+1 018	+120	+2
31	0.151 491	+17 250	46	+3	0.891 300	+2 623	276	−4	0.386 584	+1 137	119	−1
32	+0.168 741		− 52	−2	−0.888 677		+275	−1	−0.385 447		+119	+2

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

Frühlingsäquinoktium	21. März 1h 43m	Herbstäquinoktium	23. Sept. 12h 1m
Sommersolstitium	21. Juni 21 12	Wintersolstitium	22. Dez. 6 58

Erdnähe 3. Jan. 19h
Erdferne 2. Juli 21

Tag		0ʰ Welt-Zeit			
		Aberration	Parallaxe	Mittlere Länge $L_\odot$	Mittlere Anomalie $M_\odot$
1933		"	"	°	°
Jan.	−8	20.81	8.95	271.3260	349.54
	+2	20.82	8.95	281.1825	359.40
	12	20.81	8.95	291.0391	9.25
	22	20.80	8 94	300.8955	19.10
Febr.	1	20.77	8.93	310.7520	28.96
	11	20.74	8.92	320.6085	38.81
	21	20.69	8.90	330.4650	48.67
März	3	20.65	8.88	340.3214	58.53
	13	20.59	8.85	350.1779	68.38
	23	20.53	8.83	0.0344	78.24
April	2	20.47	8.80	9.8909	88.09
	12	20.42	8.78	19.7473	97.95
	22	20.36	8.75	29.6038	107.81
Mai	2	20.31	8.73	39.4603	117.66
	12	20.26	8.71	49.3167	127.52
	22	20.22	8.69	59.1732	137.37
Juni	1	20.18	8.68	69.0297	147.23
	11	20.16	8.67	78.8862	157.09
	21	20.14	8.66	88.7426	166.94
Juli	1	20.13	8.66	98.5991	176.80
	11	20.14	8.66	108.4556	186.65
	21	20.15	8.66	118.3121	196.51
	31	20.17	8.67	128.1685	206.37
Aug.	10	20.20	8.68	138.0250	216.22
	20	20.23	8.70	147.8815	226.08
	30	20.28	8.72	157.7380	235.93
Sept.	9	20.33	8.74	167.5944	245.79
	19	20.38	8.76	177.4509	255.65
	29	20.44	8.79	187.3074	265.50
Okt.	9	20.50	8.81	197.1638	275.36
	19	20.55	8.84	207.0203	285.21
	29	20.61	8.86	216.8768	295.07
Nov.	8	20.66	8.88	226.7333	304.93
	18	20.71	8.90	236.5897	314.78
	28	20.75	8.92	246.4462	324.64
Dez.	8	20.78	8.93	256.3027	334.49
	18	20.80	8.94	266.1592	344.35
	28	20.82	8.95	276.0156	354.21
	38	20.81	8.95	285.8721	4.06

Tag		0h Welt-Zeit: Scheinbare Rektaszension		Scheinbare Deklination		Parallaxe		Halbmesser		Länge	Breite
1933		h m s	m s	° ′	° ′	′ ″	″	′ ″	″	°	°
Jan.	0	21 54 24	48 49	−14 0.7	5 51.7	57 56.2	55.3	15 48.7	15.1	325.930	−1.200
	1	22 43 13	45 50	− 8 9.0	6 0.7	57 0.9	51.3	15 33.6	14.0	339.206	−0.030
	2	23 29 3	44 7	− 2 8.3	5 55.1	56 9.6	44.2	15 19.6	12.0	352.049	+1.107
	3	0 13 10	43 38	+ 3 46.8	5 38.5	55 25.4	35.1	15 7.6	9.6	4.524	+2.159
	4	0 56 48	44 13	+ 9 25.3	5 12.4	54 50.3	25.0	14 58.0	6.8	16.714	+3.089
	5	1 41 1	45 43	+14 37.7	4 36.9	54 25.3	14.9	14 51.2	4.1	28.705	+3.866
	6	2 26 44	47 55	+19 14.6	3 51.0	54 10.4	5.1	14 47.1	1.4	40.583	+4.468
	7	3 14 39	50 27	+23 5.6	2 54.3	54 5.3	3.7	14 45.7	1.0	52.425	+4.876
	8	4 5 6	52 51	+25 59.9	1 46.2	54 9.0	11.2	14 46.7	3.1	64.299	+5.076
	9	4 57 57	54 32	+27 46.1	0 28.9	54 20.2	17.3	14 49.8	4.7	76.257	+5.055
	10	5 52 29	55 5	+28 15.0	0 53.6	54 37.5	22.0	14 54.5	6.0	88.340	+4.810
	11	6 47 34	54 21	+27 21.4	2 15.3	54 59.5	25.2	15 0.5	6.9	100.575	+4.342
	12	7 41 55	52 42	+25 6.1	3 30.2	55 24.7	27.3	15 7.4	7.4	112.977	+3.662
	13	8 34 37	50 40	+21 35.9	4 33.9	55 52.0	28.5	15 14.8	7.8	125.554	+2.794
	14	9 25 17	48 47	+17 2.0	5 23.8	56 20.5	29.2	15 22.6	7.9	138.310	+1.773
	15	10 14 4	47 34	+11 38.2	5 59.1	56 49.7	29.5	15 30.5	8.1	151.251	+0.643
	16	11 1 38	47 18	+ 5 39.1	6 19.2	57 19.2	29.9	15 38.6	8.1	164.385	−0.539
	17	11 48 56	48 10	− 0 40.1	6 23.4	57 49.1	29.7	15 46.7	8.1	177.728	−1.713
	18	12 37 6	50 17	− 7 3.5	6 10.0	58 18.8	28.9	15 54.8	7.9	191.296	−2.812
	19	13 27 23	53 35	−13 13.5	5 36.3	58 47.7	26.8	16 2.7	7.3	205.104	−3.769
	20	14 20 58	57 47	−18 49.8	4 38.9	59 14.5	22.7	16 10.0	6.2	219.156	−4.517
	21	15 18 45	62 5	−23 28.7	3 15.9	59 37.2	16.1	16 16.2	4.3	233.440	−5.000
	22	16 20 50	65 15	−26 44.6	1 30.2	59 53.3	6.8	16 20.5	1.9	247.914	−5.174
	23	17 26 5	66 3	−28 14.8	0 27.6	60 0.1	4.6	16 22.4	1.2	262.508	−5.017
	24	18 32 8	64 5	−27 47.2	2 21.9	59 55.5	17.0	16 21.2	4.7	277.124	−4.535
	25	19 36 13	60 6	−25 25.3	3 57.5	59 38.5	29.0	16 16.5	7.9	291.649	−3.762
	26	20 36 19	55 25	−21 27.8	5 6.8	59 9.5	38.8	16 8.6	10.5	305.969	−2.761
	27	21 31 44	51 6	−16 21.0	5 48.7	58 30.7	45.3	15 58.1	12.4	319.992	−1.610
	28	22 22 50	47 47	−10 32.3	6 7.5	57 45.4	47.8	15 45.7	13.0	333.653	−0.392
	29	23 10 37	45 36	− 4 24.8	6 7.7	56 57.6	46.4	15 32.7	12.6	346.924	+0.816
	30	23 56 13	44 36	+ 1 42.9	5 53.7	56 11.2	41.6	15 20.1	11.4	359.814	+1.949
	31	0 40 49	44 40	+ 7 36.6	5 28.4	55 29.6	34.2	15 8.7	9.3	12.361	+2.958
Febr.	1	1 25 29	45 41	+13 5.0	4 53.2	54 55.4	24.9	14 59.4	6.8	24.622	+3.808
	2	2 11 10	47 28	+17 58.2	4 8.2	54 30.5	14.6	14 52.6	4.0	36.671	+4.474
	3	2 58 38	49 44	+22 6.4	3 13.2	54 15.9	4.0	14 48.6	1.1	48.588	+4.939
	4	3 48 22	52 3	+25 19.6	2 8.0	54 11.9	6.2	14 47.5	1.7	60.454	+5.191
	5	4 40 25	53 57	+27 27.6	0 53.4	54 18.1	15.6	14 49.2	4.3	72.348	+5.221
	6	5 34 22	54 56	+28 21.0	0 27.7	54 33.7	23.5	14 53.5	6.4	84.341	+5.025
	7	6 29 18	54 47	+27 53.3	1 50.6	54 57.2	29.5	14 59.9	8.0	96.492	+4.603
	8	7 24 5	53 38	+26 2.7	3 9.6	55 26.7	33.4	15 7.9	9.1	108.849	+3.961
	9	8 17 43	51 54	+22 53.1	4 19.8	56 0.1	35.0	15 17.0	9.5	121.444	+3.116
	10	9 9 37		+18 33.3		56 35.1		15 26.5		134.293	+2.097

Tag	Obere Kulmination in Greenwich: AR.	Änderung für 1h westl. Länge	Dekl.	Änderung für 1h westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1h westl. Länge	0h Länge, + 50° Breite: Aufgang	Änderung für 1h westl. Länge	Untergang	Änderung für 1h westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
Jan. 0	22 26 55	124	−10 11.1	+15.3	57.3	15 47.5	1.90	10 35	0.6	21 14	3.2
1	23 15 1	117	− 4 0.6	+15.5	56.4	16 31.5	1.78	10 48	0.5	22 29	3.1
2	0 0 49	113	+ 2 7.8	+15.1	55.6	17 13.3	1.71	11 1	0.5	23 41	3.0
3	0 45 42	112	+ 8 1.4	+14.3	55.0	17 54.1	1.70	11 13	0.5	—	—
4	1 30 57	114	+13 30.0	+13.0	54.5	18 35.3	1.74	11 25	0.6	0 52	2.9
5	2 17 37	119	+18 23.6	+11.4	54.2	19 17.9	1.82	11 40	0.7	2 2	2.9
6	3 6 35	126	+22 31.2	+ 9.2	54.1	20 2.8	1.93	11 58	0.9	3 13	3.0
7	3 58 19	133	+25 40.6	+ 6.5	54.1	20 50.5	2.04	12 22	1.1	4 24	2.9
8	4 52 45	139	+27 39.1	+ 3.3	54.3	21 40.8	2.15	12 53	1.5	5 33	2.8
9	5 49 10	142	+28 15.5	− 0.3	54.6	22 33.2	2.20	13 36	2.1	6 36	2.4
10	6 46 16	142	+27 23.6	− 4.0	55.0	23 26.2	2.20	14 32	2.6	7 30	2.0
11	—	—	—	—	—	—	—	15 39	2.9	8 12	1.5
12	7 42 36	139	+25 3.9	− 7.6	55.4	0 18.4	2.14	16 53	3.1	8 43	1.1
13	8 37 5	133	+21 24.2	−10.7	55.9	1 8.8	2.05	18 10	3.2	9 6	0.9
14	9 29 18	128	+16 37.4	−13.1	56.4	1 57.0	1.96	19 28	3.3	9 25	0.7
15	10 19 30	124	+10 59.0	−15.0	56.9	2 43.1	1.89	20 46	3.2	9 40	0.6
16	11 8 28	122	+ 4 45.2	−16.1	57.4	3 28.0	1.86	22 3	3.3	9 54	0.6
17	11 57 18	123	− 1 47.6	−16.5	57.9	4 12.7	1.88	23 22	3.4	10 7	0.6
18	12 47 19	128	− 8 21.9	−16.2	58.4	4 58.7	1.96	—	—	10 21	0.6
19	13 39 57	136	−14 38.5	−15.0	58.9	5 47.3	2.10	0 44	3.5	10 37	0.8
20	14 36 34	148	−20 14.0	−12.8	59.4	6 39.8	2.28	2 10	3.6	10 59	1.1
21	15 38 1	160	−24 41.0	− 9.3	59.7	7 37.1	2.49	3 37	3.6	11 28	1.5
22	16 44 6	170	−27 30.2	− 4.6	59.9	8 39.1	2.65	5 2	3.3	12 11	2.2
23	17 52 57	173	−28 18.0	+ 0.7	60.0	9 43.8	2.70	6 16	2.7	13 12	2.9
24	19 1 22	168	−26 56.6	+ 6.0	59.8	10 48.1	2.62	7 12	2.0	14 30	3.4
25	20 6 23	156	−23 38.7	+10.3	59.4	11 49.0	2.44	7 51	1.4	15 56	3.6
26	21 6 20	143	−18 51.7	+13.4	58.8	12 44.9	2.22	8 18	1.0	17 24	3.6
27	22 1 9	131	−13 7.0	+15.1	58.1	13 35.6	2.02	8 38	0.7	18 47	3.4
28	22 51 46	122	− 6 53.2	+15.9	57.3	14 22.2	1.87	8 53	0.6	20 6	3.2
29	23 39 29	117	− 0 32.6	+15.8	56.5	15 5.8	1.78	9 6	0.5	21 20	3.1
30	0 25 37	114	+ 5 38.0	+15.0	55.7	15 47.9	1.74	9 18	0.5	22 33	3.0
31	1 11 27	115	+11 25.6	+13.8	55.1	16 29.7	1.75	9 31	0.6	23 45	3.0
Febr. 1	1 58 5	118	+16 39.3	+12.2	54.6	17 12.3	1.81	9 45	0.6	—	—
2	2 46 27	124	+21 8.5	+10.1	54.3	17 56.6	1.89	10 1	0.8	0 57	3.0
3	3 37 13	130	+24 42.4	+ 7.6	54.2	18 43.3	2.00	10 22	1.0	2 9	3.0
4	4 30 35	136	+27 9.2	+ 4.6	54.3	19 32.6	2.10	10 50	1.4	3 19	2.8
5	5 26 11	141	+28 18.0	+ 1.1	54.5	20 24.1	2.18	11 28	1.9	4 25	2.6
6	6 23 4	143	+28 0.6	− 2.6	54.9	21 16.9	2.20	12 19	2.4	5 22	2.2
7	7 19 55	141	+26 14.1	− 6.3	55.4	22 9.6	2.18	13 22	2.8	6 9	1.7
8	8 15 34	137	+23 2.3	− 9.6	56.0	23 1.2	2.11	14 35	3.1	6 44	1.3
9	9 9 17	132	+18 35.2	−12.5	56.6	23 50.8	2.03	15 52	3.3	7 10	1.0
10	—	—	—	—	—	—	—	17 12	3.3	7 30	0.8

Tag	0h Welt-Zeit: Scheinbare Rektaszension	Diff.	Scheinbare Deklination	Diff.	Parallaxe	Diff.	Halbmesser	Diff.	Länge	Breite
1933	h m s	m s	° ′	° ′	′ ″	″	′ ″	″	°	°
Febr. 10	9 9 37	50 6	+18 33.3	5 17.0	56 35.1	34.2	15 26.5	9.4	134.293	+2.097
11	9 59 43	48 46	+13 16.3	5 59.1	57 9.3	31.5	15 35.9	8.6	147.395	+0.947
12	10 48 29	48 12	+ 7 17.2	6 24.2	57 40.8	27.6	15 44.5	7.5	160.738	−0.277
13	11 36 41	48 40	+ 0 53.0	6 31.5	58 8.4	22.8	15 52.0	6.2	174.300	−1.505
14	12 25 21	50 14	− 5 38.5	6 19.7	58 31.2	17.8	15 58.2	4.8	188.050	−2.665
15	13 15 35	52 54	−11 58.2	5 47.0	58 49.0	13.1	16 3.0	3.6	201.959	−3.681
16	14 8 29	56 24	−17 45.2	4 52.1	59 2.1	8.6	16 6.6	2.4	215.995	−4.487
17	15 4 53	60 8	−22 37.3	3 34.0	59 10.7	4.4	16 9.0	1.1	230.125	−5.028
18	16 5 1	63 6	−26 11.3	1 55.8	59 15.1	0.3	16 10.1	0.0	244.317	−5.266
19	17 8 7	64 15	−28 7.1	0 5.3	59 14.8	5.4	16 10.1	1.5	258.533	−5.184
20	18 12 22	63 4	−28 12.4	1 45.3	59 9.4	11.3	16 8.6	3.1	272.733	−4.786
21	19 15 26	59 58	−26 27.1	3 23.2	58 58.1	17.9	16 5.5	4.9	286.868	−4.100
22	20 15 24	55 56	−23 3.9	4 39.8	58 40.2	24.5	16 0.6	6.6	300.884	−3.173
23	21 11 20	51 57	−18 24.1	5 32.3	58 15.7	30.6	15 54.0	8.4	314.728	−2.070
24	22 3 17	48 42	−12 51.8	6 1.8	57 45.1	35.2	15 45.6	9.5	328.351	−0.865
25	22 51 59	46 27	− 6 50.0	6 11.3	57 9.9	37.6	15 36.1	10.3	341.715	+0.366
26	23 38 26	45 15	− 0 38.7	6 4.4	56 32.3	37.5	15 25.8	10.2	354.794	+1.552
27	0 23 41	45 4	+ 5 25.7	5 43.7	55 54.8	34.7	15 15.6	9.5	7.584	+2.633
28	1 8 45	45 47	+11 9.4	5 11.2	55 20.1	29.3	15 6.1	8.0	20.098	+3.563
März 1	1 54 32	47 15	+16 20.6	4 27.9	54 50.8	21.8	14 58.1	5.9	32.369	+4.310
2	2 41 47	49 12	+20 48.5	3 34.5	54 29.0	12.8	14 52.2	3.5	44.444	+4.852
3	3 30 59	51 19	+24 23.0	2 31.3	54 16.2	2.7	14 48.7	0.7	56.386	+5.178
4	4 22 18	53 9	+26 54.3	1 19.4	54 13.5	7.9	14 48.0	2.1	68.267	+5.280
5	5 15 27	54 16	+28 13.7	0 0.9	54 21.4	18.3	14 50.1	5.0	80.161	+5.157
6	6 9 43	54 27	+28 14.6	1 20.5	54 39.7	27.9	14 55.1	7.6	92.149	+4.810
7	7 4 10	53 41	+26 54.1	2 40.1	55 7.6	35.8	15 2.7	9.8	104.306	+4.245
8	7 57 51	52 19	+24 14.0	3 53.9	55 43.4	41.6	15 12.5	11.3	116.700	+3.473
9	8 50 10	50 48	+20 20.1	4 57.6	56 25.0	44.3	15 23.8	12.1	129.389	+2.514
10	9 40 58	49 37	+15 22.5	5 48.4	57 9.3	43.8	15 35.9	11.9	142.411	+1.402
11	10 30 35	49 6	+ 9 34.1	6 23.4	57 53.1	39.6	15 47.8	10.8	155.781	+0.186
12	11 19 41	49 30	+ 3 10.7	6 40.1	58 32.7	32.4	15 58.6	8.8	169.490	−1.070
13	12 9 11	50 59	− 3 29.4	6 35.9	59 5.1	23.0	16 7.4	6.3	183.497	−2.288
14	13 0 10	53 30	−10 5.3	6 8.5	59 28.1	12.4	16 13.7	3.4	197.738	−3.384
15	13 53 40	56 47	−16 13.8	5 15.9	59 40.5	2.2	16 17.1	0.6	212.131	−4.277
16	14 50 27	60 19	−21 29.7	3 58.7	59 42.7	6.7	16 17.7	1.8	226.586	−4.902
17	15 50 46	63 4	−25 28.4	2 20.6	59 36.0	13.6	16 15.9	3.8	241.017	−5.217
18	16 53 50	64 5	−27 49.0	0 30.4	59 22.4	18.8	16 12.1	5.1	255.353	−5.204
19	17 57 55	62 52	−28 19.4	1 19.7	59 3.6	22.2	16 7.0	6.0	269.540	−4.874
20	19 0 47	59 47	−26 59.7	2 57.7	58 41.4	24.7	16 1.0	6.8	283.545	−4.257
21	20 0 34	55 48	−24 2.0	4 16.1	58 16.7	26.5	15 54.2	7.2	297.350	−3.401
22	20 56 22	51 53	−19 45.9	5 12.3	57 50.2	27.9	15 47.0	7.6	310.948	−2.365
23	21 48 15		−14 33.6		57 22.3		15 39.4		324.338	−1.214

Tag	Obere Kulmination in Greenwich							0^h Länge, + 50° Breite			
	AR.	Änderung für 1^h westl. Länge	Dekl.	Änderung für 1^h westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1^h westl. Länge	Aufgang	Änderung für 1^h westl. Länge	Untergang	Änderung für 1^h westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
Febr. 10	—	—	—	—	—	—	—	17 12	3.3	7 30	0.8
11	10 1 2	127	+13 7.2	−14.7	57.2	0 38.5	1.95	18 31	3.3	7 47	0.6
12	10 51 19	125	+ 6 55.2	−16.2	57.7	1 24.7	1.91	19 50	3.3	8 1	0.6
13	11 41 3	125	+ 0 17.6	−16.8	58.2	2 10.4	1.91	21 10	3.4	8 14	0.6
14	12 31 24	128	− 6 26.2	−16.7	58.6	2 56.7	1.96	22 32	3.5	8 28	0.6
15	13 23 38	134	−12 55.1	−15.6	58.9	3 44.8	2.07	23 57	3.6	8 44	0.8
16	14 19 1	143	−18 46.2	−13.5	59.1	4 36.1	2.22	—	—	9 4	1.0
17	15 18 24	154	−23 34.2	−10.3	59.2	5 31.4	2.39	1 24	3.6	9 30	1.3
18	16 21 54	163	−26 53.1	− 6.1	59.3	6 30.8	2.55	2 49	3.4	10 7	1.9
19	17 28 19	168	−28 21.0	− 1.1	59.2	7 33.1	2.62	4 5	2.9	11 0	2.6
20	18 35 13	165	−27 47.0	+ 3.9	59.1	8 35.9	2.58	5 6	2.2	12 10	3.1
21	19 39 54	157	−25 16.5	+ 8.5	58.9	9 36.5	2.45	5 50	1.5	13 31	3.5
22	20 40 30	146	−21 9.0	+12.0	58.5	10 33.0	2.26	6 20	1.1	14 57	3.5
23	21 36 30	134	−15 51.1	+14.3	58.0	11 24.9	2.08	6 41	0.8	16 21	3.4
24	22 28 25	125	− 9 50.1	+15.6	57.5	12 12.7	1.92	6 58	0.6	17 41	3.3
25	23 17 16	119	− 3 29.6	+16.0	56.8	12 57.5	1.83	7 12	0.5	18 58	3.1
26	0 4 17	116	+ 2 50.7	+15.6	56.2	13 40.5	1.77	7 24	0.5	20 12	3.1
27	0 50 39	116	+ 8 54.9	+14.6	55.6	14 22.8	1.77	7 37	0.5	21 26	3.0
28	1 37 24	118	+14 29.6	+13.2	55.0	15 5.5	1.80	7 50	0.6	22 38	3.0
März 1	2 25 29	122	+19 22.8	+11.2	54.6	15 49.5	1.87	8 5	0.7	23 51	3.0
2	3 15 35	128	+23 23.1	+ 8.8	54.3	16 35.5	1.97	8 25	0.9	—	—
3	4 7 59	134	+26 19.6	+ 5.9	54.2	17 23.9	2.06	8 50	1.2	1 3	2.9
4	5 2 34	139	+28 1.6	+ 2.6	54.3	18 14.4	2.14	9 23	1.6	2 11	2.7
5	5 58 37	141	+28 20.9	− 1.0	54.6	19 6.3	2.18	10 8	2.1	3 12	2.3
6	6 55 4	141	+27 13.3	− 4.6	55.0	19 58.7	2.18	11 5	2.6	4 2	1.9
7	7 50 51	138	+24 39.6	− 8.1	55.6	20 50.4	2.13	12 14	3.0	4 42	1.4
8	8 45 10	134	+20 45.7	−11.3	56.3	21 40.6	2.06	13 29	3.2	5 11	1.1
9	9 37 48	130	+15 42.9	−13.9	57.1	22 29.2	1.99	14 48	3.3	5 34	0.9
10	10 29 6	127	+ 9 45.3	−15.8	57.9	23 16.4	1.95	16 7	3.3	5 52	0.7
11	—	—	—	—	—	—	—	17 28	3.4	6 7	0.6
12	11 19 47	127	+ 3 9.9	−17.0	58.5	0 3.0	1.95	18 49	3.4	6 21	0.6
13	12 10 56	129	− 3 43.4	−17.3	59.1	0 50.1	1.99	20 13	3.5	6 35	0.6
14	13 3 45	135	−10 31.8	−16.6	59.5	1 38.8	2.08	21 39	3.6	6 50	0.7
15	13 59 26	144	−16 49.6	−14.7	59.7	2 30.4	2.23	23 8	3.7	7 9	0.9
16	14 58 52	154	−22 9.1	−11.7	59.7	3 25.8	2.39	—	—	7 33	1.2
17	16 2 12	163	−26 2.1	− 7.6	59.6	4 25.0	2.54	0 36	3.5	8 7	1.7
18	17 8 23	167	−28 5.8	− 2.7	59.3	5 27.1	2.61	1 57	3.0	8 55	2.4
19	18 15 9	165	−28 8.4	+ 2.4	59.0	6 29.7	2.58	3 2	2.4	10 0	3.0
20	19 19 53	157	−26 13.9	+ 7.0	58.6	7 30.3	2.45	3 50	1.7	11 17	3.4
21	20 20 41	146	−22 39.6	+10.7	58.1	8 27.1	2.27	4 23	1.2	12 41	3.5
22	21 16 57	135	−17 50.1	+13.3	57.7	9 19.2	2.08	4 47	0.9	14 4	3.4
23	22 9 6	126	−12 10.2	+14.9	57.2	10 7.3	1.93	5 5	0.7	15 23	3.3

Mond 1933

Tag	0h Welt-Zeit									
	Scheinbare Rektaszension		Scheinbare Deklination		Parallaxe		Halbmesser		Länge	Breite
1933	h m s	m s	° ′	° ′	′ ″	″	′ ″	″	°	°
März 23	21 48 15	48 38	−14 33.6	5 47.5	57 22.3	29.2	15 39.4	7.9	324.338	−1.214
24	22 36 53	46 22	− 8 46.1	6 4.1	56 53.1	29.9	15 31.5	8.2	337.521	−0.017
25	23 23 15	45 8	− 2 42.0	6 4.3	56 23.2	30.0	15 23.3	8.2	350.497	+1.161
26	0 8 23	44 54	+ 3 22.3	5 50.2	55 53.2	29.0	15 15.1	7.8	3.265	+2.259
27	0 53 17	45 32	+ 9 12.5	5 23.3	55 24.2	26.4	15 7.3	7.3	15.829	+3.228
28	1 38 49	46 54	+14 35.8	4 44.2	54 57.8	22.4	15 0.0	6.1	28.198	+4.027
29	2 25 43	48 46	+19 20.0	3 53.9	54 35.4	16.6	14 53.9	4.5	40.387	+4.630
30	3 14 29	50 45	+23 13.9	2 53.0	54 18.8	9.1	14 49.4	2.5	52.425	+5.018
31	4 5 14	52 32	+26 6.9	1 43.3	54 9.7	0.5	14 46.9	0.1	64.353	+5.184
April 1	4 57 46	53 38	+27 50.2	0 27.0	54 9.2	9.2	14 46.8	2.5	76.223	+5.127
2	5 51 24	53 50	+28 17.2	0 52.1	54 18.4	19.4	14 49.3	5.3	88.099	+4.851
3	6 45 14	53 11	+27 25.1	2 10.1	54 37.8	29.6	14 54.6	8.1	100.054	+4.363
4	7 38 25	51 55	+25 15.0	3 23.3	55 7.4	38.9	15 2.7	10.6	112.169	+3.675
5	8 30 20	50 31	+21 51.7	4 28.8	55 46.3	46.6	15 13.3	12.7	124.524	+2.805
6	9 20 51	49 22	+17 22.9	5 24.2	56 32.9	51.6	15 26.0	14.0	137.195	+1.777
7	10 10 13	48 54	+11 58.7	6 7.1	57 24.5	52.9	15 40.0	14.4	150.248	+0.629
8	10 59 7	49 20	+ 5 51.6	6 34.6	58 17.4	49.8	15 54.4	13.6	163.725	−0.588
9	11 48 27	50 52	− 0 43.0	6 43.2	59 7.2	42.0	16 8.0	11.4	177.636	−1.807
10	12 39 19	53 31	− 7 26.2	6 28.3	59 49.2	30.0	16 19.4	8.2	191.950	−2.945
11	13 32 50	57 7	−13 54.5	5 45.9	60 19.2	15.1	16 27.6	4.1	206.591	−3.916
12	14 29 57	61 4	−19 40.4	4 34.5	60 34.3	0.5	16 31.7	0.1	221.442	−4.636
13	15 31 1	64 23	−24 14.9	2 56.7	60 33.8	14.8	16 31.6	4.0	236.360	−5.044
14	16 35 24	65 48	−27 11.6	1 2.1	60 19.0	26.3	16 27.6	7.2	251.202	−5.113
15	17 41 12	64 40	−28 13.7	0 54.4	59 52.7	34.2	16 20.4	9.3	265.845	−4.845
16	18 45 52	61 20	−27 19.3	2 38.2	59 18.5	38.3	16 11.1	10.5	280.202	−4.276
17	19 47 12	56 52	−24 41.1	4 0.5	58 40.2	39.5	16 0.6	10.7	294.231	−3.461
18	20 44 4	52 28	−20 40.6	4 59.1	58 0.7	38.6	15 49.9	10.5	307.922	−2.464
19	21 36 32	48 48	−15 41.5	5 36.2	57 22.1	36.3	15 39.4	9.9	321.297	−1.354
20	22 25 20	46 13	−10 5.3	5 55.0	56 45.8	33.3	15 29.5	9.1	334.388	−0.197
21	23 11 33	44 46	− 4 10.3	5 58.8	56 12.5	30.2	15 20.4	8.2	347.236	+0.948
22	23 56 19	44 23	+ 1 48.5	5 49.1	55 42.3	26.9	15 12.2	7.4	359.876	+2.025
23	0 40 42	44 55	+ 7 37.6	5 27.2	55 15.4	23.6	15 4.8	6.4	12.340	+2.987
24	1 25 37	46 15	+13 4.8	4 53.2	54 51.8	20.0	14 58.4	5.4	24.650	+3.794
25	2 11 52	48 7	+17 58.0	4 7.4	54 31.8	15.7	14 53.0	4.3	36.826	+4.417
26	2 59 59	50 12	+22 5.4	3 10.1	54 16.1	10.6	14 48.7	2.9	48.884	+4.834
27	3 50 11	52 4	+25 15.5	2 2.9	54 5.5	4.6	14 45.8	1.3	60.843	+5.034
28	4 42 15	53 15	+27 18.4	0 48.4	54 0.9	2.5	14 44.5	0.7	72.731	+5.014
29	5 35 30	53 32	+28 6.8	0 29.4	54 3.4	10.6	14 45.2	2.9	84.582	+4.778
30	6 29 2	52 49	+27 37.4	1 46.1	54 14.0	19.6	14 48.1	5.4	96.445	+4.336
Mai 1	7 21 51	51 28	+25 51.3	2 57.9	54 33.6	29.1	14 53.5	7.9	108.378	+3.702
2	8 13 19	49 52	+22 53.4	4 2.3	55 2.7	38.4	15 1.4	10.5	120.453	+2.895
3	9 3 11		+18 51.1		55 41.1		15 11.9		132.750	+1.941

Tag	Obere Kulmination in Greenwich							0^h Länge, + 50° Breite			
	AR.	Änderung für 1^h westl. Länge	Dekl.	Änderung für 1^h westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1^h westl. Länge	Aufgang	Änderung für 1^h westl. Länge	Untergang	Änderung für 1^h westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
März 23	22 9 6	126	−12 10.2	+14.9	57.2	10 7.3	1.93	5 5	0.7	15 23	3.3
24	22 58 6	119	− 6 2.2	+15.6	56.7	10 52.2	1.83	5 19	0.6	16 40	3.1
25	23 45 8	116	+ 0 14.8	+15.7	56.1	11 35.2	1.77	5 32	0.5	17 54	3.1
26	0 31 21	115	+ 6 24.2	+15.0	55.6	12 17.4	1.76	5 44	0.5	19 7	3.0
27	1 17 49	117	+12 11.7	+13.8	55.2	12 59.8	1.79	5 57	0.6	20 20	3.0
28	2 5 26	121	+17 23.8	+12.1	54.7	13 43.3	1.85	6 11	0.7	21 33	3.0
29	2 54 54	126	+21 47.8	+ 9.8	54.4	14 28.7	1.93	6 29	0.9	22 45	3.0
30	3 46 33	132	+25 11.6	+ 7.1	54.2	15 16.3	2.03	6 52	1.1	23 56	2.8
31	4 40 19	137	+27 24.3	+ 3.9	54.1	16 6.0	2.11	7 21	1.4	—	—
April 1	5 35 35	139	+28 17.4	+ 0.5	54.2	16 57.2	2.15	8 1	1.9	1 0	2.5
2	6 31 24	139	+27 46.1	− 3.1	54.5	17 48.9	2.15	8 53	2.4	1 54	2.0
3	7 26 42	137	+25 50.5	− 6.5	55.0	18 40.1	2.11	9 56	2.8	2 38	1.6
4	8 20 43	133	+22 35.1	− 9.7	55.6	19 30.1	2.05	11 7	3.1	3 11	1.2
5	9 13 10	129	+18 8.1	−12.5	56.4	20 18.4	1.98	12 23	3.2	3 36	0.9
6	10 4 17	127	+12 40.6	−14.7	57.3	21 5.5	1.94	13 41	3.3	3 55	0.7
7	10 54 46	126	+ 6 25.6	−16.4	58.2	21 51.9	1.94	15 0	3.3	4 11	0.6
8	11 45 38	129	− 0 20.3	−17.3	59.1	22 38.7	1.98	16 21	3.4	4 26	0.6
9	12 38 8	134	− 7 17.1	−17.3	59.8	23 27.1	2.08	17 44	3.5	4 40	0.6
10	—	—	—	—	—	—	—	19 11	3.7	4 55	0.7
11	13 33 32	143	−13 59.2	−16.0	60.3	0 18.5	2.22	20 41	3.8	5 12	0.8
12	14 32 59	154	−19 56.5	−13.5	60.6	1 13.8	2.40	22 13	3.7	5 35	1.1
13	15 36 52	165	−24 35.8	− 9.6	60.6	2 13.6	2.58	23 40	3.3	6 6	1.6
14	16 44 22	172	−27 27.0	− 4.6	60.3	3 17.0	2.68	—	—	6 50	2.2
15	17 53 6	171	−28 12.2	+ 0.8	59.8	4 21.6	2.67	0 53	2.7	7 51	2.8
16	19 0 2	163	−26 52.0	+ 5.8	59.2	5 24.4	2.54	1 48	1.9	9 6	3.3
17	20 2 47	150	−23 44.1	+ 9.7	58.5	6 23.0	2.34	2 26	1.3	10 29	3.5
18	21 0 25	138	−19 15.0	+12.5	57.8	7 16.6	2.13	2 52	0.9	11 52	3.4
19	21 53 21	127	−13 51.3	+14.3	57.2	8 5.4	1.95	3 11	0.7	13 12	3.3
20	22 42 37	120	− 7 55.8	+15.2	56.6	8 50.6	1.83	3 27	0.6	14 28	3.1
21	23 29 30	115	− 1 47.0	+15.4	56.0	9 33.5	1.75	3 40	0.5	15 42	3.0
22	0 15 16	114	+ 4 19.6	+15.0	55.5	10 15.2	1.73	3 52	0.5	16 54	3.0
23	1 1 4	115	+10 10.4	+14.1	55.1	10 56.9	1.75	4 4	0.5	18 6	3.0
24	1 47 53	119	+15 32.3	+12.6	54.7	11 39.7	1.82	4 18	0.6	19 18	3.0
25	2 36 29	124	+20 12.3	+10.6	54.4	12 24.2	1.90	4 35	0.8	20 31	3.0
26	3 27 18	130	+23 57.5	+ 8.1	54.2	13 11.0	2.00	4 56	1.0	21 42	2.9
27	4 20 21	135	+26 35.9	+ 5.1	54.0	13 59.9	2.08	5 22	1.3	22 48	2.6
28	5 15 6	138	+27 57.4	+ 1.7	54.0	14 50.6	2.13	5 59	1.8	23 46	2.2
29	6 10 33	139	+27 56.4	− 1.8	54.2	15 42.0	2.14	6 46	2.2	—	—
30	7 5 35	136	+26 32.2	− 5.2	54.4	16 32.9	2.10	7 45	2.6	0 34	1.8
Mai 1	7 59 16	132	+23 49.2	− 8.3	54.9	17 22.5	2.03	8 52	2.9	1 10	1.3
2	8 51 13	128	+19 55.4	−11.1	55.5	18 10.4	1.96	10 5	3.1	1 38	1.0
3	9 41 34	124	+15 0.4	−13.4	56.3	18 56.7	1.90	11 20	3.1	1 58	0.8

Tag		Scheinbare Rektaszension		Scheinbare Deklination		Parallaxe		Halbmesser		Länge	Breite
		0h Welt-Zeit									
1933		h m s	m s	° ′	° ′	′ ″	″	′ ″	″	°	°
Mai	3	9 3 11	48 31	+18 51.1	4 57.4	55 41.1	47.0	15 11.9	12.8	132.750	+1.941
	4	9 51 42	47 48	+13 53.7	5 42.3	56 28.1	53.6	15 24.7	14.6	145.352	+0.869
	5	10 39 30	47 59	+ 8 11.4	6 15.3	57 21.7	57.3	15 39.3	15.6	158.338	−0.278
	6	11 27 29	49 20	+ 1 56.1	6 33.4	58 19.0	56.7	15 54.9	15.4	171.772	−1.447
	7	12 16 49	51 54	− 4 37.3	6 32.3	59 15.7	50.8	16 10.3	13.9	185.693	−2.570
	8	13 8 43	55 41	−11 9.6	6 6.1	60 6.5	39.5	16 24.2	10.7	200.093	−3.568
	9	14 4 24	60 16	−17 15.7	5 9.9	60 46.0	23.4	16 34.9	6.4	214.909	−4.355
	10	15 4 40	64 42	−22 25.6	3 41.8	61 9.4	4.6	16 41.3	1.2	230.022	−4.856
	11	16 9 22	67 32	−26 7.4	1 47.7	61 14.0	14.3	16 42.5	3.8	245.266	−5.017
	12	17 16 54	67 32	−27 55.1	0 16.8	60 59.7	30.5	16 38.7	8.4	260.456	−4.825
	13	18 24 26	64 35	−27 38.3	2 12.9	60 29.2	42.4	16 30.3	11.5	275.423	−4.303
	14	19 29 1	59 49	−25 25.4	3 46.4	59 46.8	49.2	16 18.8	13.4	290.040	−3.508
	15	20 28 50	54 43	−21 39.0	4 52.3	58 57.6	51.3	16 5.4	14.0	304.236	−2.515
	16	21 23 33	50 17	−16 46.7	5 32.8	58 6.3	49.8	15 51.4	13.5	317.994	−1.402
	17	22 13 50	47 1	−11 13.9	5 53.1	57 16.5	45.5	15 37.9	12.5	331.339	−0.244
	18	23 0 51	45 1	− 5 20.8	5 57.2	56 31.0	40.0	15 25.4	10.9	344.320	+0.896
	19	23 45 52	44 12	+ 0 36.4	5 48.8	55 51.0	33.8	15 14.5	9.2	356.998	+1.963
	20	0 30 4	44 27	+ 6 25.2	5 28.8	55 17.2	27.5	15 5.3	7.4	9.436	+2.915
	21	1 14 31	45 35	+11 54.0	4 57.9	54 49.7	21.5	14 57.9	5.9	21.689	+3.714
	22	2 0 6	47 24	+16 51.9	4 15.8	54 28.2	15.9	14 52.0	4.3	33.803	+4.335
	23	2 47 30	49 32	+21 7.7	3 22.3	54 12.3	10.5	14 47.7	2.9	45.816	+4.756
	24	3 37 2	51 35	+24 30.0	2 18.3	54 1.8	5.3	14 44.8	1.5	57.755	+4.964
	25	4 28 37	53 1	+26 48.3	1 5.6	53 56.5	0.2	14 43.3	0.1	69.643	+4.955
	26	5 21 38	53 31	+27 53.9	0 11.4	53 56.7	6.1	14 43.4	1.7	81.503	+4.731
	27	6 15 9	52 55	+27 42.5	1 28.3	54 2.8	12.5	14 45.1	3.4	93.361	+4.302
	28	7 8 4	51 29	+26 14.2	2 40.2	54 15.3	19.7	14 48.5	5.4	105.250	+3.683
	29	7 59 33	49 40	+23 34.0	3 44.0	54 35.0	27.5	14 53.9	7.4	117.215	+2.897
	30	8 49 13	47 58	+19 50.0	4 38.2	55 2.5	35.5	15 1.3	9.7	129.310	+1.971
	31	9 37 11	46 48	+15 11.8	5 22.0	55 38.0	43.4	15 11.0	11.8	141.604	+0.937
Juni	1	10 23 59	46 30	+ 9 49.8	5 55.0	56 21.4	50.3	15 22.8	13.7	154.171	−0.166
	2	11 10 29	47 17	+ 3 54.8	6 16.1	57 11.7	55.1	15 36.5	15.0	167.088	−1.291
	3	11 57 46	49 21	− 2 21.3	6 22.1	58 6.8	56.6	15 51.5	15.5	180.426	−2.382
	4	12 47 7	52 46	− 8 43.4	6 8.7	59 3.4	53.6	16 7.0	14.6	194.237	−3.373
	5	13 39 53	57 20	−14 52.1	5 29.7	59 57.0	45.2	16 21.6	12.3	208.535	−4.189
	6	14 37 13	62 29	−20 21.8	4 19.6	60 42.2	31.1	16 33.9	8.5	223.285	−4.756
	7	15 39 42	66 54	−24 41.4	2 38.2	61 13.3	12.9	16 42.4	3.5	238.390	−5 009
	8	16 46 36	68 58	−27 19.6	0 34.7	61 26.2	7.2	16 45.9	2.0	253.696	−4.910
	9	17 55 34	67 42	−27 54.3	1 31.9	61 19.0	26.5	16 43.9	7.2	269.017	−4.459
	10	19 3 16	63 37	−26 22.4	3 21.5	60 52.5	41.9	16 36.7	11.4	284.163	−3.698
	11	20 6 53	58 17	−23 0.9	4 42.4	60 10.6	52.3	16 25.3	14.3	298.976	−2.700
	12	21 5 10	53 11	−18 18.5	5 33.1	59 18.3	56.8	16 11.0	15.5	313.357	−1.554
	13	21 58 21		−12 45.4		58 21.5		15 55.5		327.261	−0.350

Tag	Obere Kulmination in Greenwich							0^h Länge, + 50° Breite			
	AR.	Änderung für 1^h westl. Länge	Dekl.	Änderung für 1^h westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1^h westl. Länge	Aufgang	Änderung für 1^h westl. Länge	Untergang	Änderung für 1^h westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
Mai 3	9 41 34	124	+15 0.4	−13.4	56.3	18 56.7	1.90	11 20	3.1	1 58	0.8
4	10 30 57	123	+ 9 15.5	−15.2	57.2	19 42.0	1.88	12 36	3.2	2 15	0.7
5	11 20 21	124	+ 2 53.1	−16.5	58.2	20 27.3	1.91	13 54	3.3	2 30	0.6
6	12 11 1	129	− 3 51.6	−17.1	59.2	21 13.9	1.98	15 14	3.4	2 44	0.6
7	13 4 23	138	−10 38.3	−16.6	60.0	22 3.2	2.13	16 38	3.6	2 58	0.6
8	14 1 52	150	−17 0.6	−15.0	60.7	22 56.6	2.33	18 6	3.8	3 14	0.8
9	15 4 27	163	−22 24.7	−11.8	61.2	23 55.1	2.55	19 38	3.9	3 34	1.0
10	—	—	—	—	—	—	—	21 11	3.7	4 1	1.4
11	16 12 4	174	−26 14.1	− 7.1	61.2	0 58.6	2.73	22 34	3.1	4 40	2.0
12	17 22 49	178	−27 58.6	− 1.5	61.0	2 5.2	2.79	23 39	2.3	5 36	2.7
13	18 33 15	172	−27 26.9	+ 4.1	60.4	3 11.5	2.70	—	—	6 48	3.3
14	19 39 57	160	−24 51.4	+ 8.7	59.6	4 14.1	2.50	0 24	1.6	8 12	3.5
15	20 41 5	145	−20 40.5	+12.0	58.8	5 11.1	2.25	0 55	1.1	9 38	3.5
16	21 36 35	132	−15 25.9	+14.0	57.9	6 2.6	2.04	1 17	0.8	11 1	3.4
17	22 27 28	123	− 9 34.8	+15.1	57.1	6 49.4	1.88	1 34	0.6	12 19	3.2
18	23 15 10	116	− 3 28.3	+15.4	56.3	7 33.0	1.78	1 47	0.5	13 33	3.0
19	0 1 5	114	+ 2 37.9	+15.1	55.6	8 14.9	1.73	2 0	0.5	14 45	3.0
20	0 46 32	114	+ 8 30.5	+14.3	55.1	8 56.3	1.73	2 12	0.5	15 56	3.0
21	1 32 38	117	+13 57.9	+13.0	54.7	9 38.3	1.78	2 26	0.6	17 8	3.0
22	2 20 19	122	+18 48.2	+11.1	54.3	10 21.9	1.86	2 41	0.7	18 20	3.0
23	3 10 12	128	+22 48.8	+ 8.8	54.1	11 7.7	1.96	3 1	0.9	19 31	2.9
24	4 2 27	133	+25 47.4	+ 6.0	54.0	11 55.9	2.05	3 26	1.2	20 39	2.7
25	4 56 42	137	+27 32.6	+ 2.7	53.9	12 46.1	2.12	3 59	1.6	21 40	2.3
26	5 52 1	139	+27 57.0	− 0.7	54.0	13 37.3	2.14	4 43	2.1	22 30	1.9
27	6 47 12	137	+26 58.2	− 4.2	54.2	14 28.4	2.10	5 38	2.5	23 10	1.4
28	7 41 6	133	+24 39.9	− 7.3	54.5	15 18.3	2.04	6 43	2.8	23 39	1.1
29	8 33 5	127	+21 10.2	−10.1	54.9	16 6.2	1.95	7 53	3.0	—	—
30	9 23 5	123	+16 39.5	−12.4	55.4	16 52.1	1.88	9 6	3.1	0 2	0.9
31	10 11 35	120	+11 19.2	−14.2	56.2	17 36.5	1.84	10 21	3.1	0 20	0.7
Juni 1	10 59 29	120	+ 5 20.9	−15.6	57.0	18 20.4	1.83	11 35	3.1	0 35	0.6
2	11 47 57	123	− 1 3.1	−16.3	57.9	19 4.8	1.88	12 51	3.3	0 49	0.6
3	12 38 23	130	− 7 37.7	−16.4	58.9	19 51.1	2.00	14 11	3.4	1 2	0.6
4	13 32 20	140	−14 2.9	−15.5	59.8	20 41.0	2.18	15 34	3.6	1 17	0.7
5	14 31 14	154	−19 51.4	−13.3	60.6	21 35.8	2.40	17 3	3.8	1 34	0.8
6	15 35 56	169	−24 28.8	− 9.6	61.2	22 36.4	2.64	18 35	3.8	1 57	1.1
7	16 45 45	179	−27 18.4	− 4.4	61.4	23 42.1	2.81	20 4	3.4	2 29	1.6
8	—	—	—	—	—	—	—	21 19	2.7	3 16	2.4
9	17 57 58	180	−27 53.2	+ 1.5	61.3	0 50.2	2.83	22 15	2.0	4 22	3.1
10	19 8 36	171	−26 9.8	+ 7.0	60.8	1 56.7	2.68	22 53	1.3	5 45	3.6
11	20 14 24	157	−22 29.6	+11.1	60.1	2 58.4	2.45	23 19	0.9	7 14	3.7
12	21 14 8	142	−17 27.1	+13.8	59.2	3 54.0	2.20	23 38	0.7	8 41	3.5
13	22 8 20	129	−11 36.0	+15.2	58.2	4 44.1	1.99	23 54	0.6	10 3	3.3

Tag	Scheinbare Rektaszension (h m s)	Diff. (m s)	Scheinbare Deklination (° ′)	Diff. (° ′)	Parallaxe (′ ″)	Diff. (″)	Halbmesser (′ ″)	Diff. (″)	Länge (°)	Breite (°)
	0h Welt-Zeit									
1933 Juni 13	21 58 21	49 7	−12 45.4	5 58.4	58 21.5	56.6	15 55.5	15.4	327.261	−0.350
14	22 47 28	46 22	− 6 47.0	6 4.2	57 24.9	52.4	15 40.1	14.2	340.698	+0.837
15	23 33 50	44 55	− 0 42.8	5 55.7	56 32.5	45.9	15 25.9	12.5	353.714	+1.943
16	0 18 45	44 38	+ 5 12.9	5 35.4	55 46.6	37.9	15 13.4	10.4	6.372	+2.923
17	1 3 23	45 23	+10 48.3	5 5.0	55 8.7	29.6	15 3.0	8.0	18.745	+3.741
18	1 48 46	46 54	+15 53.3	4 24.5	54 39.1	21.3	14 55.0	5.9	30.906	+4.374
19	2 35 40	48 57	+20 17.8	3 33.4	54 17.8	13.8	14 49.1	3.7	42.919	+4.805
20	3 24 37	51 3	+23 51.2	2 31.9	54 4.0	6.8	14 45.4	1.8	54.839	+5.022
21	4 15 40	52 45	+26 23.1	1 21.4	53 57.2	0.5	14 43.6	0.2	66.710	+5.021
22	5 8 25	53 34	+27 44.5	0 5.0	53 56.7	5.1	14 43.4	1.4	78.568	+4.803
23	6 1 59	53 17	+27 49.5	1 12.6	54 1.8	10.3	14 44.8	2.8	90.441	+4.376
24	6 55 16	51 59	+26 36.9	2 26.2	54 12.1	15.5	14 47.6	4.2	102.354	+3.756
25	7 47 15	50 7	+24 10.7	3 31.9	54 27.6	20.8	14 51.8	5.7	114.335	+2.966
26	8 37 22	48 11	+20 38.8	4 27.1	54 48.4	26.2	14 57.5	7.1	126.415	+2.033
27	9 25 33	46 36	+16 11.7	5 11.0	55 14.6	32.0	15 4.6	8.8	138.631	+0.995
28	10 12 9	45 47	+11 0.7	5 43.4	55 46.6	37.8	15 13.4	10.3	151.032	−0.108
29	10 57 56	45 57	+ 5 17.3	6 3.9	56 24.4	43.1	15 23.7	11.7	163.672	−1.229
30	11 43 53	47 18	− 0 46.6	6 11.4	57 7.5	47.4	15 35.4	12.9	176.612	−2.315
Juli 1	12 31 11	49 57	− 6 58.0	6 3.0	57 54.9	49.5	15 48.3	13.5	189.909	−3.307
2	13 21 8	53 51	−13 1.0	5 34.3	58 44.4	48.4	16 1.8	13.2	203.610	−4.142
3	14 14 59	58 46	−18 35.3	4 39.9	59 32.8	43.0	16 15.0	11.7	217.736	−4.754
4	15 13 45	63 47	−23 15.2	3 16.1	60 15.8	32.8	16 26.7	8.9	232.270	−5.083
5	16 17 32	67 28	−26 31.3	1 25.5	60 48.6	18.0	16 35.6	4.9	247.147	−5.082
6	17 25 0	68 21	−27 56.8	0 39.8	61 6.6	0.3	16 40.5	0.1	262.250	−4.732
7	18 33 21	66 4	−27 17.0	2 40.1	61 6.9	18.3	16 40.6	5.0	277.424	−4.049
8	19 39 25	61 34	−24 36.9	4 18.0	60 48.6	34.9	16 35.6	9.5	292.498	−3.087
9	20 40 59	56 27	−20 18.9	5 25.2	60 13.7	47.5	16 26.1	12.9	307.316	−1.929
10	21 37 26	51 56	−14 53.7	6 2.6	59 26.2	54.9	16 13.2	15.0	321.762	−0.672
11	22 29 22	48 32	− 8 51.1	6 15.4	58 31.3	56.9	15 58.2	15.5	335.765	+0.591
12	23 17 54	46 27	− 2 35.7	6 9.7	57 34.4	54.4	15 42.7	14.8	349.310	+1.781
13	0 4 21	45 35	+ 3 34.0	5 50.0	56 40.0	48.6	15 27.9	13.2	2.417	+2.840
14	0 49 56	45 48	+ 9 24.0	5 19.1	55 51.4	40.5	15 14.7	11.1	15.139	+3.725
15	1 35 44	46 55	+14 43.1	4 38.3	55 10.9	31.3	15 3.6	8.5	27.544	+4.412
16	2 22 39	48 39	+19 21.4	3 47.8	54 39.6	21.6	14 55.1	5.9	39.705	+4.886
17	3 11 18	50 39	+23 9.2	2 47.8	54 18.0	12.4	14 49.2	3.3	51.698	+5.138
18	4 1 57	52 25	+25 57.0	1 38.9	54 5.6	3.7	14 45.9	1.1	63.592	+5.166
19	4 54 22	53 31	+27 35.9	0 23.4	54 1.9	3.8	14 44.8	1.1	75.448	+4.974
20	5 47 53	53 35	+27 59.3	0 54.6	54 5.7	10.3	14 45.9	2.8	87.317	+4.567
21	6 41 28	52 38	+27 4.7	2 10.6	54 16.0	15.7	14 48.7	4.2	99.243	+3.960
22	7 34 6	50 56	+24 54.1	3 19.5	54 31.7	20.1	14 52.9	5.5	111.259	+3.172
23	8 25 2	48 59	+21 34.6	4 18.5	54 51.8	23.8	14 58.4	6.5	123.395	+2.233
24	9 14 1		+17 16.1		55 15.6		15 4.9		135.674	+1.178

Tag	Obere Kulmination in Greenwich							0h Länge, + 50° Breite			
	AR.	Änderung für 1h westl. Länge	Dekl.	Änderung für 1h westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1h westl. Länge	Aufgang	Änderung für 1h westl. Länge	Untergang	Änderung für 1h westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
Juni 13	22 8 20	129	−11 36.0	+15.2	58.2	4 44.1	1.99	23 54	0.6	10 3	3.3
14	22 58 18	121	− 5 23.5	+15.7	57.2	5 30.0	1.85	—	—	11 21	3.2
15	23 45 34	116	+ 0 50.7	+15.4	56.3	6 13.2	1.77	0 7	0.5	12 35	3.0
16	0 31 36	115	+ 6 52.1	+14.6	55.6	6 55.2	1.74	0 19	0.5	13 47	3.0
17	1 17 40	116	+12 28.9	+13.4	55.0	7 37.2	1.77	0 33	0.6	14 59	3.0
18	2 4 51	120	+17 30.4	+11.7	54.5	8 20.4	1.83	0 48	0.7	16 10	3.0
19	2 53 57	126	+21 45.2	+ 9.5	54.2	9 5.4	1.93	1 6	0.9	17 22	2.9
20	3 45 23	132	+25 1.7	+ 6.8	54.0	9 52.8	2.02	1 29	1.1	18 30	2.7
21	4 39 2	136	+27 8.6	+ 3.7	53.9	10 42.3	2.10	1 59	1.5	19 32	2.5
22	5 34 11	139	+27 56.7	+ 0.3	54.0	11 33.4	2.14	2 40	1.9	20 28	2.0
23	6 29 39	138	+27 21.5	− 3.2	54.1	12 24.8	2.13	3 32	2.4	21 10	1.6
24	7 24 11	134	+25 24.8	− 6.5	54.3	13 15.2	2.07	4 35	2.8	21 43	1.2
25	8 16 52	129	+22 13.8	− 9.4	54.7	14 3.8	1.98	5 44	3.0	22 7	0.9
26	9 7 22	124	+17 59.4	−11.8	55.1	14 50.3	1.89	6 57	3.1	22 26	0.7
27	9 55 56	120	+12 54.1	−13.6	55.6	15 34.8	1.83	8 11	3.1	22 42	0.6
28	10 43 17	118	+ 7 10.3	−15.0	56.2	16 18.0	1.79	9 24	3.1	22 55	0.5
29	11 30 26	119	+ 1 0.6	−15.8	56.9	17 1.1	1.81	10 38	3.1	23 8	0.6
30	12 18 41	123	− 5 21.5	−16.0	57.7	17 45.3	1.89	11 54	3.2	23 22	0.6
Juli 1	13 9 27	131	−11 40.0	−15.4	58.6	18 32.0	2.02	13 13	3.4	23 38	0.7
2	14 4 16	143	−17 34.3	−13.9	59.4	19 22.8	2.22	14 36	3.6	23 57	1.0
3	15 4 23	157	−22 36.9	−11.1	60.2	20 18.8	2.45	16 4	3.7	—	—
4	16 10 15	171	−26 14.6	− 6.8	60.8	21 20.5	2.68	17 33	3.6	0 24	1.4
5	17 20 34	179	−27 55.0	− 1.4	61.1	22 26.7	2.80	18 55	3.1	1 2	1.9
6	18 32 8	177	−27 18.9	+ 4.4	61.1	23 34.2	2.78	20 0	2.3	1 57	2.7
7	—	—	—	—	—	—	—	20 46	1.6	3 13	3.4
8	19 41 9	167	−24 31.1	+ 9.4	60.8	0 39.1	2.61	21 18	1.1	4 40	3.7
9	20 45 1	152	−19 58.4	+13.1	60.2	1 38.8	2.37	21 41	0.8	6 10	3.7
10	21 43 9	139	−14 16.5	+15.2	59.3	2 32.9	2.15	21 58	0.6	7 38	3.6
11	22 36 21	128	− 7 58.7	+16.1	58.4	3 22.0	1.96	22 12	0.6	9 1	3.3
12	23 26 0	121	− 1 31.3	+16.1	57.4	4 7.6	1.85	22 26	0.6	10 18	3.2
13	0 13 36	118	+ 4 46.7	+15.3	56.5	4 51.1	1.79	22 39	0.6	11 33	3.1
14	1 0 30	117	+10 41.1	+14.1	55.7	5 33.9	1.79	22 53	0.6	12 46	3.0
15	1 47 53	120	+16 0.3	+12.4	55.0	6 17.3	1.83	23 10	0.8	13 59	3.0
16	2 36 42	125	+20 33.8	+10.3	54.5	7 2.0	1.91	23 32	1.0	15 11	3.0
17	3 27 34	130	+24 10.9	+ 7.7	54.2	7 48.8	2.00	—	—	16 21	2.8
18	4 20 37	135	+26 40.9	+ 4.7	54.1	8 37.8	2.08	0 0	1.4	17 27	2.6
19	5 15 25	138	+27 54.4	+ 1.4	54.0	9 28.5	2.13	0 37	1.8	18 24	2.1
20	6 11 1	139	+27 45.3	− 2.1	54.2	10 20.0	2.15	1 25	2.3	19 10	1.7
21	7 6 10	136	+26 12.9	− 5.5	54.4	11 11.1	2.10	2 25	2.7	19 45	1.3
22	7 59 50	132	+23 22.3	− 8.6	54.7	12 0.7	2.03	3 33	2.9	20 13	1.0
23	8 51 24	126	+19 23.3	−11.2	55.1	12 48.2	1.93	4 46	3.1	20 33	0.8
24	9 40 53	121	+14 28.6	−13.3	55.5	13 33.6	1.85	6 0	3.1	20 49	0.6

Mond 1933

Tag		0h Welt-Zeit									
		Scheinbare Rektaszension		Scheinbare Deklination		Parallaxe		Halbmesser		Länge	Breite
1933		h m s	m s	° ′	° ′	′ ″	″	′ ″	″	°	″
Juli	24	9 14 1	47 13	+17 16.1	5 5.3	55 15.6	26.9	15 4.9	7.3	135.674	+1.178
	25	10 1 14	46 4	+12 10.8	5 39.7	55 42.5	29.7	15 12.2	8.1	148.120	+0.050
	26	10 47 18	45 46	+ 6 31.1	6 1.0	56 12.2	32.4	15 20.3	8.8	160.760	−1.099
	27	11 33 4	46 31	+ 0 30.1	6 8.7	56 44.6	34.8	15 29.1	9.5	173.621	−2.213
	28	12 19 35	48 26	− 5 38.6	6 1.4	57 19.4	36.7	15 38.6	10.0	186.733	−3.235
	29	13 8 1	51 32	−11 40.0	5 36.2	57 56.1	37.5	15 48.6	10.2	200.126	−4.103
	30	13 59 33	55 42	−17 16.2	4 49.5	58 33.6	36.5	15 58.8	10.0	213.822	−4.760
	31	14 55 15	60 19	−22 5.7	3 37.9	59 10.1	32.9	16 8.8	8.9	227.830	−5.152
Aug.	1	15 55 34	64 23	−25 43.6	2 1.4	59 43.0	26.0	16 17.7	7.2	242.136	−5.237
	2	16 59 57	66 31	−27 45.0	0 6.5	60 9.0	15.9	16 24.9	4.3	256.696	−4.992
	3	18 6 28	65 54	−27 51.5	1 52.7	60 24.9	2.7	16 29.2	0.7	271.434	−4.417
	4	19 12 22	62 50	−25 58.8	3 39.4	60 27.6	11.9	16 29.9	3.2	286.244	−3.545
	5	20 15 12	58 29	−22 19.4	5 1.3	60 15.7	26.4	16 26.7	7.2	301.003	−2.439
	6	21 13 41	54 7	−17 18.1	5 54.2	59 49.3	38.6	16 19.5	10.6	315.589	−1.185
	7	22 7 48	50 32	−11 23.9	6 19.6	59 10.7	47.1	16 8.9	12.8	329.896	+0.122
	8	22 58 20	48 6	− 5 4.3	6 22.6	58 23.6	51.2	15 56.1	13.9	343.848	+1.391
	9	23 46 26	46 49	+ 1 18.3	6 7.5	57 32.4	50.9	15 42.2	13.9	357.405	+2.546
	10	0 33 15	46 37	+ 7 25.8	5 38.7	56 41.5	46.8	15 28.3	12.8	10.563	+3.531
	11	1 19 52	47 20	+13 4.5	4 58.3	55 54.7	39.9	15 15.5	10.8	23.347	+4.311
	12	2 7 12	48 44	+18 2.8	4 7.9	55 14.8	31.1	15 4.7	8.5	35.808	+4.865
	13	2 55 56	50 29	+22 10.7	3 8.2	54 43.7	21.1	14 56.2	5.7	48.008	+5.186
	14	3 46 25	52 10	+25 18.9	2 0.1	54 22.6	11.0	14 50.5	3.0	60.022	+5.274
	15	4 38 35	53 21	+27 19.0	0 45.6	54 11.6	1.1	14 47.5	0.3	71.925	+5.135
	16	5 31 56	53 40	+28 4.6	0 32.3	54 10.5	7.9	14 47.2	2.1	83.791	+4.778
	17	6 25 36	53 2	+27 32.3	1 49.5	54 18.4	15.8	14 49.3	4.3	95.688	+4.214
	18	7 18 38	51 38	+25 42.8	3 1.5	54 34.2	22.1	14 53.6	6.0	107.677	+3.463
	19	8 10 16	49 51	+22 41.3	4 4.9	54 56.3	26.7	14 59.6	7.3	119.809	+2.547
	20	9 0 7	48 9	+18 36.4	4 57.1	55 23.0	29.5	15 6.9	8.1	132.123	+1.500
	21	9 48 16	46 55	+13 39.3	5 36.7	55 52.5	30.9	15 15.0	8.4	144.648	+0.364
	22	10 35 11	46 24	+ 8 2.6	6 2.5	56 23.4	30.8	15 23.4	8.4	157.400	−0.811
	23	11 21 35	46 50	+ 2 0.1	6 13.4	56 54.2	29.7	15 31.8	8.1	170.388	−1.966
	24	12 8 25	48 19	− 4 13.3	6 8.1	57 23.9	28.1	15 39.9	7.6	183.610	−3.036
	25	12 56 44	50 52	−10 21.4	5 44.6	57 52.0	26.1	15 47.5	7.1	197.058	−3.958
	26	13 47 36	54 23	−16 6.0	5 0.5	58 18.1	23.8	15 54.6	6.5	210.720	−4.670
	27	14 41 59	58 24	−21 6.5	3 53.8	58 41.9	20.9	16 1.1	5.7	224.580	−5.123
	28	15 40 23	62 6	−25 0.3	2 24.7	59 2.8	17.2	16 6.8	4.7	238.615	−5.279
	29	16 42 29	64 23	−27 25.0	0 38.5	59 20.0	12.4	16 11.5	3.4	252.799	−5.118
	30	17 46 52	64 26	−28 3.5	1 14.6	59 32.4	5.8	16 14.9	1.5	267.094	−4.641
	31	18 51 18	62 15	−26 48.9	3 0.8	59 38.2	2.4	16 16.4	0.6	281.454	−3.873
Sept.	1	19 53 33	58 40	−23 48.1	4 28.4	59 35.8	11.8	16 15.8	3.2	295.821	−2.862
	2	20 52 13	54 46	−19 19.7	5 31.7	59 24.0	21.6	16 12.6	5.9	310.129	−1.676
	3	21 46 59		−13 48.0		59 2.4		16 6.7		324.306	−0.397

Tag	Obere Kulmination in Greenwich							0h Länge, + 50° Breite			
	AR.	Änderung für 1h westl. Länge	Dekl.	Änderung für 1h westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1h westl. Länge	Aufgang	Änderung für 1h westl. Länge	Untergang	Änderung für 1h westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
Juli 24	9 40 53	121	+14 28.6	−13.3	55.5	13 33.6	1.85	6 0	3.1	20 49	0.6
25	10 28 45	118	+ 8 51.8	−14.7	56.0	14 17.4	1.81	7 15	3.1	21 3	0.6
26	11 15 54	118	+ 2 47.0	−15.6	56.5	15 0.5	1.80	8 29	3.1	21 17	0.6
27	12 3 24	120	− 3 31.6	−15.9	57.1	15 43.9	1.84	9 43	3.1	21 30	0.6
28	12 52 34	126	− 9 48.6	−15.4	57.7	16 29.0	1.93	11 0	3.3	21 44	0.6
29	13 44 45	135	−15 45.8	−14.2	58.4	17 17.1	2.09	12 20	3.4	22 1	0.8
30	14 41 17	147	−21 0.8	−11.9	59.0	18 9.6	2.29	13 45	3.6	22 24	1.1
31	15 42 56	161	−25 6.3	− 8.4	59.6	19 7.1	2.50	15 11	3.5	22 56	1.6
Aug. 1	16 49 26	171	−27 33.0	− 3.7	60.1	20 9.5	2.68	16 34	3.2	23 42	2.3
2	17 58 49	174	−27 56.9	+ 1.8	60.4	21 14.8	2.73	17 45	2.6	—	—
3	19 7 52	170	−26 10.4	+ 7.0	60.5	22 19.7	2.65	18 38	1.9	0 46	3.0
4	20 13 34	159	−22 26.5	+11.4	60.3	23 21.3	2.47	19 16	1.3	2 8	3.6
5	—	—	—	—	—	—	—	19 42	0.9	3 37	3.7
6	21 14 23	146	−17 13.9	+14.4	59.8	0 18.0	2.26	20 1	0.7	5 7	3.6
7	22 10 19	134	−11 5.9	+16.0	59.1	1 9.9	2.08	20 17	0.6	6 32	3.5
8	23 2 21	126	− 4 32.8	+16.5	58.3	1 57.8	1.93	20 31	0.6	7 54	3.3
9	23 51 47	121	+ 2 1.0	+16.1	57.4	2 43.2	1.86	20 44	0.6	9 12	3.2
10	0 39 57	120	+ 8 16.6	+15.1	56.6	3 27.3	1.83	20 59	0.6	10 27	3.1
11	1 28 3	121	+13 59.7	+13.4	55.8	4 11.3	1.85	21 14	0.8	11 42	3.1
12	2 17 6	125	+18 58.2	+11.4	55.1	4 56.3	1.90	21 35	1.0	12 56	3.0
13	3 7 48	129	+23 1.2	+ 8.8	54.6	5 43.0	1.98	22 0	1.2	14 8	2.9
14	4 0 27	134	+25 58.6	+ 5.9	54.3	6 31.5	2.06	22 33	1.6	15 16	2.7
15	4 54 52	138	+27 41.2	+ 2.6	54.2	7 21.9	2.13	23 18	2.1	16 17	2.3
16	5 50 20	139	+28 2.4	− 0.9	54.2	8 13.2	2.15	—	—	17 7	1.9
17	6 45 47	138	+26 59.8	− 4.3	54.4	9 4.6	2.12	0 14	2.5	17 46	1.4
18	7 40 10	134	+24 36.2	− 7.6	54.7	9 54.9	2.06	1 19	2.9	18 16	1.1
19	8 32 46	129	+20 59.1	−10.4	55.1	10 43.4	1.98	2 31	3.1	18 37	0.8
20	9 23 23	124	+16 19.8	−12.8	55.6	11 30.0	1.90	3 46	3.1	18 56	0.7
21	10 12 19	121	+10 51.6	−14.5	56.1	12 14.9	1.85	5 1	3.1	19 11	0.6
22	11 0 17	119	+ 4 48.9	−15.6	56.7	12 58.8	1.82	6 16	3.1	19 25	0.6
23	11 48 13	121	− 1 32.9	−16.1	57.2	13 42.6	1.85	7 32	3.2	19 38	0.6
24	12 37 17	125	− 7 56.8	−15.8	57.7	14 27.6	1.92	8 49	3.3	19 52	0.6
25	13 28 41	132	−14 4.3	−14.7	58.1	15 15.0	2.04	10 9	3.4	20 8	0.8
26	14 23 39	143	−19 33.8	−12.6	58.6	16 5.8	2.21	11 32	3.5	20 29	1.0
27	15 22 59	154	−24 0.5	− 9.4	59.0	17 1.1	2.40	12 57	3.5	20 57	1.4
28	16 26 42	164	−26 58.3	− 5.2	59.3	18 0.7	2.56	14 20	3.3	21 37	2.0
29	17 33 31	169	−28 4.8	− 0.2	59.5	19 3.4	2.64	15 34	2.8	22 33	2.7
30	18 40 58	167	−27 8.5	+ 4.9	59.6	20 6.7	2.60	16 32	2.1	23 46	3.3
31	19 46 17	159	−24 14.8	+ 9.4	59.6	21 7.9	2.48	17 14	1.5	—	—
Sept. 1	20 47 42	148	−19 43.7	+12.9	59.4	22 5.2	2.30	17 43	1.1	1 11	3.6
2	21 44 43	138	−14 3.2	+15.2	59.1	22 58.2	2.13	18 5	0.8	2 39	3.6
3	22 37 56	129	− 7 42.0	+16.4	58.5	23 47.3	1.98	18 22	0.6	4 5	3.5

Mond 1933

Tag	Scheinbare Rektaszension		Scheinbare Deklination		Parallaxe		Halbmesser		Länge	Breite
	0ʰ Welt-Zeit									
1933	h m s	m s	° ′	° ′	′ ″	″	′ ″	″	°	°
Sept. 3	21 46 59	51 23	−13 48.0	6 9.3	59 2.4	30.7	16 6.7	8.4	324.306	−0.397
4	22 38 22	48 56	− 7 38.7	6 23.7	58 31.7	37.7	15 58.3	10.2	338.282	+0.887
5	23 27 18	47 33	− 1 15.0	6 18.1	57 54.0	42.1	15 48.1	11.5	352.000	+2.096
6	0 14 51	47 11	+ 5 3.1	5 55.7	57 11.9	43.1	15 36.6	11.7	5.414	+3.159
7	1 2 2	47 43	+10 58.8	5 19.2	56 28.8	40.9	15 24.9	11.2	18.505	+4.029
8	1 49 45	48 54	+16 18.0	4 30.9	55 47.9	35.9	15 13.7	9.8	31.274	+4.675
9	2 38 39	50 29	+20 48.9	3 32.1	55 12.0	28.4	15 3.9	7.7	43.746	+5.081
10	3 29 8	52 3	+24 21.0	2 24.7	54 43.6	19.2	14 56.2	5.3	55.966	+5.247
11	4 21 11	53 12	+26 45.7	1 10.7	54 24.4	9.2	14 50.9	2.5	67.995	+5.179
12	5 14 23	53 36	+27 56.4	0 6.7	54 15.2	1.2	14 48.4	0.4	79.905	+4.889
13	6 7 59	53 7	+27 49.7	1 23.9	54 16.4	11.4	14 48.8	3.1	91.772	+4.390
14	7 1 6	51 55	+26 25.8	2 37.2	54 27.8	20.7	14 51.9	5.6	103.676	+3.702
15	7 53 1	50 17	+23 48.6	3 43.5	54 48.5	28.6	14 57.5	7.8	115.697	+2.845
16	8 43 18	48 43	+20 5.1	4 40.2	55 17.1	34.4	15 5.3	9.4	127.903	+1.848
17	9 32 1	47 31	+15 24.9	5 25.9	55 51.5	37.8	15 14.7	10.3	140.355	+0.744
18	10 19 32	47 1	+ 9 59.0	5 58.8	56 29.3	38.5	15 25.0	10.5	153.096	−0.419
19	11 6 33	47 23	+ 4 0.2	6 17.0	57 7.8	36.6	15 35.5	9.9	166.150	−1.587
20	11 53 56	48 47	− 2 16.8	6 18.3	57 44.4	32.1	15 45.4	8.8	179.519	−2.695
21	12 42 43	51 11	− 8 35.1	5 59.8	58 16.5	26.1	15 54.2	7.1	193.176	−3.671
22	13 33 54	54 29	−14 34.9	5 19.2	58 42.6	19.1	16 1.3	5.2	207.079	−4.449
23	14 28 23	58 16	−19 54.1	4 14.6	59 1.7	12.0	16 6.5	3.3	221.164	−4.968
24	15 26 39	61 44	−24 8.7	2 47.3	59 13.7	5.4	16 9.8	1.4	235.364	−5.188
25	16 28 23	63 51	−26 56.0	1 3.0	59 19.1	0.4	16 11.2	0.1	249.613	−5.091
26	17 32 14	63 52	−27 59.0	0 47.9	59 18.7	5.3	16 11.1	1.4	263.854	−4.681
27	18 36 6	61 46	−27 11.1	2 32.5	59 13.4	9.9	16 9.7	2.7	278.042	−3.987
28	19 37 52	58 17	−24 38.6	4 0.7	59 3.5	14.3	16 7.0	3.9	292.145	−3.055
29	20 36 9	54 30	−20 37.9	5 7.0	58 49.2	18.7	16 3.1	5.1	306.141	−1.947
30	21 30 39	51 10	−15 30.9	5 50.5	58 30.5	23.2	15 58.0	6.3	320.009	−0.735
Okt. 1	22 21 49	48 44	− 9 40.4	6 12.7	58 7.3	27.5	15 51.7	7.5	333.730	+0.505
2	23 10 33	47 21	− 3 27.7	6 15.9	57 39.8	31.1	15 44.2	8.5	347.281	+1.699
3	23 57 54	46 58	+ 2 48.2	6 1.9	57 8.7	33.6	15 35.7	9.1	0.634	+2.780
4	0 44 52	47 30	+ 8 50.1	5 32.7	56 35.1	34.2	15 26.6	9.4	13.767	+3.692
5	1 32 22	48 42	+14 22.8	4 49.7	56 0.9	32.8	15 17.2	8.9	26.659	+4.396
6	2 21 4	50 18	+19 12.5	3 54.6	55 28.1	29.2	15 8.3	8.0	39.302	+4.868
7	3 11 22	51 55	+23 7.1	2 49.1	54 58.9	23.5	15 0.3	6.4	51.703	+5.100
8	4 3 17	53 8	+25 56.2	1 36.1	54 35.4	15.9	14 53.9	4.3	63.887	+5.094
9	4 56 25	53 35	+27 32.3	0 19.0	54 19.5	7.0	14 49.6	1.9	75.894	+4.864
10	5 50 0	53 8	+27 51.3	0 58.1	54 12.5	3.1	14 47.7	0.8	87.784	+4.424
11	6 43 8	51 55	+26 53.2	2 11.4	54 15.6	13.5	14 48.5	3.7	99.627	+3.797
12	7 35 3	50 16	+24 41.8	3 18.1	54 29.1	23.7	14 52.2	6.5	111.505	+3.004
13	8 25 19	48 38	+21 23.7	4 16.5	54 52.8	33.1	14 58.7	9.0	123.502	+2.072
14	9 13 57		+17 7.2		55 25.9		15 7.7		135.706	+1.031

Tag	Obere Kulmination in Greenwich							0ʰ Länge, + 50° Breite			
	AR.	Änderung für 1ʰ westl. Länge	Dekl.	Änderung für 1ʰ westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1ʰ westl. Länge	Aufgang	Änderung für 1ʰ westl. Länge	Untergang	Änderung für 1ʰ westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
Sept. 3	22 37 56	129	− 7 42.0	+16.4	58.5	23 47.3	1.98	18 22	0.6	4 5	3.5
4	—	—	—	—	—	—	—	18 36	0.6	5 28	3.4
5	23 28 26	124	− 1 6.0	+16.5	57.9	0 33.7	1.90	18 50	0.6	6 47	3.3
6	0 17 26	122	+ 5 23.2	+15.8	57.2	1 18.7	1.86	19 4	0.6	8 4	3.2
7	1 6 5	122	+11 27.7	+14.5	56.4	2 3.3	1.87	19 19	0.7	9 20	3.2
8	1 55 24	125	+16 52.4	+12.5	55.7	2 48.5	1.91	19 38	0.9	10 36	3.1
9	2 46 5	129	+21 24.5	+10.1	55.1	3 35.1	1.98	20 1	1.1	11 50	3.0
10	3 38 33	133	+24 52.7	+ 7.2	54.7	4 23.5	2.05	20 31	1.5	13 1	2.8
11	4 32 42	137	+27 7.6	+ 4.0	54.4	5 13.6	2.11	21 11	1.9	14 5	2.5
12	5 27 58	139	+28 2.1	+ 0.5	54.2	6 4.8	2.14	22 2	2.4	15 0	2.0
13	6 23 26	138	+27 33.3	− 2.9	54.3	6 56.1	2.13	23 4	2.7	15 43	1.6
14	7 18 5	135	+25 42.6	− 6.3	54.6	7 46.7	2.08	—	—	16 16	1.2
15	8 11 13	131	+22 35.7	− 9.3	55.0	8 35.8	2.00	0 13	3.0	16 42	0.9
16	9 2 31	126	+18 21.8	−11.8	55.5	9 23.0	1.93	1 27	3.1	17 1	0.7
17	9 52 13	123	+13 12.0	−13.9	56.1	10 8.6	1.88	2 42	3.1	17 17	0.6
18	10 40 53	121	+ 7 19.5	−15.4	56.8	10 53.2	1.85	3 58	3.2	17 31	0.6
19	11 29 24	122	+ 0 58.8	−16.2	57.4	11 37.7	1.87	5 14	3.2	17 45	0.6
20	12 18 52	126	− 5 33.0	−16.3	58.0	12 23.1	1.93	6 32	3.3	17 59	0.6
21	13 10 27	132	−11 56.3	−15.5	58.5	13 10.6	2.04	7 53	3.4	18 15	0.7
22	14 5 17	142	−17 47.9	−13.6	58.9	14 1.4	2.20	9 16	3.5	18 34	0.9
23	15 4 12	153	−22 41.6	−10.7	59.2	14 56.2	2.38	10 43	3.6	18 59	1.3
24	16 7 16	162	−26 10.7	− 6.6	59.3	15 55.2	2.53	12 8	3.4	19 36	1.9
25	17 13 23	167	−27 52.0	− 1.8	59.3	16 57.2	2.61	13 25	2.9	20 28	2.5
26	18 20 16	166	−27 33.4	+ 3.3	59.3	17 59.9	2.59	14 28	2.3	21 35	3.1
27	19 25 17	159	−25 18.2	+ 7.9	59.1	19 0.8	2.47	15 14	1.6	22 55	3.4
28	20 26 37	148	−21 23.6	+11.5	58.9	19 58.1	2.30	15 46	1.2	—	—
29	21 23 42	138	−16 14.2	+14.1	58.6	20 51.1	2.13	16 10	0.9	0 20	3.5
30	22 16 58	129	−10 15.7	+15.6	58.2	21 40.3	1.98	16 28	0.7	1 45	3.5
Okt. 1	23 7 27	124	− 3 52.1	+16.2	57.7	22 26.7	1.90	16 43	0.6	3 7	3.4
2	23 56 19	121	+ 2 35.6	+16.0	57.2	23 11.5	1.85	16 56	0.6	4 26	3.3
3	0 44 44	121	+ 8 49.1	+15.0	56.6	23 55.8	1.86	17 10	0.6	5 43	3.2
4	—	—	—	—	—	—	—	17 25	0.7	6 59	3.1
5	1 33 43	124	+14 31.6	+13.4	56.0	0 40.7	1.90	17 42	0.8	8 14	3.1
6	2 24 3	128	+19 28.4	+11.2	55.4	1 27.0	1.96	18 3	1.0	9 30	3.1
7	3 16 10	133	+23 25.9	+ 8.5	54.9	2 15.0	2.04	18 30	1.3	10 43	2.9
8	4 10 3	137	+26 12.8	+ 5.4	54.5	3 4.8	2.11	19 6	1.7	11 51	2.6
9	5 5 12	139	+27 40.7	+ 2.0	54.3	3 55.9	2.14	19 53	2.2	12 50	2.2
10	6 0 40	138	+27 45.8	− 1.5	54.2	4 47.3	2.13	20 51	2.6	13 38	1.8
11	6 55 27	135	+26 28.8	− 4.9	54.3	5 38.0	2.08	21 57	2.9	14 15	1.4
12	7 48 44	131	+23 54.8	− 7.9	54.6	6 27.2	2.01	23 8	3.0	14 43	1.0
13	8 40 9	126	+20 12.0	−10.6	55.0	7 14.6	1.94	—	—	15 4	0.8
14	9 29 52	123	+15 30.3	−12.8	55.6	8 0.2	1.87	0 21	3.1	15 22	0.7

Tag	Scheinbare Rektaszension (0ʰ Welt-Zeit) h m s	Diff. m s	Scheinbare Deklination ° ′	Diff. ° ′	Parallaxe ′ ″	Diff. ″	Halbmesser ′ ″	Diff. ″	Länge °	Breite °
1933 Okt. 14	9 13 57	47 24	+17 7.2	5 5.5	55 25.9	40.9	15 7.7	11.2	135.706	+1.031
15	10 1 21	46 50	+12 1.7	5 43.7	56 6.8	46.2	15 18.9	12.5	148.198	−0.082
16	10 48 11	47 10	+ 6 18.0	6 9.8	56 53.0	48.1	15 31.4	13.1	161.044	−1.219
17	11 35 21	48 33	+ 0 8.2	6 20.7	57 41.1	46.2	15 44.5	12.6	174.288	−2.323
18	12 23 54	51 2	− 6 12.5	6 12.7	58 27.3	40.3	15 57.1	11.0	187.944	−3.327
19	13 14 56	54 32	−12 25.2	5 41.5	59 7.6	30.9	16 8.1	8.4	201.983	−4.157
20	14 9 28	58 38	−18 6.7	4 43.7	59 38.5	19.1	16 16.5	5.2	216.337	−4.745
21	15 8 6	62 33	−22 50.4	3 19.1	59 57.6	6.3	16 21.7	1.8	230.903	−5.035
22	16 10 39	65 5	−26 9.5	1 33.1	60 3.9	5.6	16 23.5	1.6	245.559	−4.999
23	17 15 44	65 17	−27 42.6	0 22.0	59 58.3	15.5	16 21.9	4.2	260.184	−4.636
24	18 21 1	63 2	−27 20.6	2 11.2	59 42.8	22.8	16 17.7	6.2	274.677	−3.978
25	19 24 3	59 11	−25 9.4	3 42.7	59 20.0	27.4	16 11.5	7.5	288.967	−3.079
26	20 23 14	54 57	−21 26.7	4 51.0	58 52.6	29.9	16 4.0	8.0	303.019	−2.007
27	21 18 11	51 11	−16 35.7	5 36.0	58 22.7	30.8	15 56.0	8.5	316.827	−0.834
28	22 9 22	48 25	−10 59.7	6 0.7	57 51.9	30.8	15 47.5	8.4	330.399	+0.365
29	22 57 47	46 48	− 4 59.0	6 7.6	57 21.1	30.4	15 39.1	8.3	343.756	+1.524
30	23 44 35	46 15	+ 1 8.6	5 58.9	56 50.7	29.7	15 30.8	8.1	356.916	+2.582
31	0 30 50	46 41	+ 7 7.5	5 36.0	56 21.0	28.7	15 22.7	7.8	9.890	+3.488
Nov. 1	1 17 31	47 55	+12 43.5	4 59.5	55 52.3	27.3	15 14.9	7.4	22.683	+4.202
2	2 5 26	49 38	+17 43.0	4 10.0	55 25.0	25.2	15 7.5	6.9	35.297	+4.698
3	2 55 4	51 28	+21 53.0	3 8.7	54 59.8	21.8	15 0.6	5.9	47.730	+4.961
4	3 46 32	52 56	+25 1.7	1 58.1	54 38.0	17.4	14 54.7	4.8	59.984	+4.989
5	4 39 28	53 36	+26 59.8	0 41.9	54 20.6	11.3	14 49.9	3.1	72.074	+4.792
6	5 33 4	53 17	+27 41.7	0 35.4	54 9.3	4.1	14 46.8	1.1	84.024	+4.384
7	6 26 21	52 4	+27 6.3	1 49.1	54 5.2	4.6	14 45.7	1.3	95.876	+3.789
8	7 18 25	50 16	+25 17.2	2 56.0	54 9.8	14.0	14 47.0	3.8	107.685	+3.032
9	8 8 41	48 22	+22 21.2	3 54.1	54 23.8	24.1	14 50.8	6.5	119.522	+2.141
10	8 57 3	46 50	+18 27.1	4 43.0	54 47.9	34.0	14 57.3	9.3	131.469	+1.148
11	9 43 53	45 57	+13 44.1	5 22.5	55 21.9	43.3	15 6.6	11.8	143.615	+0.086
12	10 29 50	45 58	+ 8 21.6	5 51.9	56 5.2	50.6	15 18.4	13.8	156.053	−1.005
13	11 15 48	47 6	+ 2 29.7	6 9.6	56 55.8	55.1	15 32.2	15.0	168.867	−2.077
14	12 2 54	49 25	− 3 39.9	6 12.1	57 50.9	55.5	15 47.2	15.1	182.125	−3.073
15	12 52 19	52 57	− 9 52.0	5 54.7	58 46.4	51.0	16 2.3	13.9	195.865	−3.927
16	13 45 16	57 30	−15 46.7	5 11.4	59 37.4	41.3	16 16.2	11.3	210.081	−4.570
17	14 42 46	62 18	−20 58.1	3 58.1	60 18.7	26.9	16 27.5	7.3	224.711	−4.935
18	15 45 4	66 10	−24 56.2	2 16.5	60 45.6	9.9	16 34.8	2.7	239.639	−4.974
19	16 51 14	67 40	−27 12.7	0 16.9	60 55.5	7.7	16 37.5	2.1	254.710	−4.671
20	17 58 54	66 6	−27 29.6	1 43.1	60 47.8	23.1	16 35.4	6.3	269.754	−4.043
21	19 5 0	62 12	−25 46.5	3 26.0	60 24.7	34.8	16 29.1	9.5	284.619	−3.147
22	20 7 12	57 21	−22 20.5	4 42.6	59 49.9	42.1	16 19.6	11.4	299.191	−2.059
23	21 4 33	52 48	−17 37.9	5 32.0	59 7.8	45.0	16 8.2	12.3	313.409	−0.865
24	21 57 21		−12 5.9		58 22.8		15 55.9		327.257	+0.352

Tag	Obere Kulmination in Greenwich							0h Länge, + 50° Breite			
	AR.	Änderung für 1h westl. Länge	Dekl.	Änderung für 1h westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1h westl. Länge	Aufgang	Änderung für 1h westl. Länge	Untergang	Änderung für 1h westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
Okt. 14	9 29 52	123	+15 30.3	−12.8	55.6	8 0.2	1.87	0 21	3.1	15 22	0.7
15	10 18 26	121	+10 0.3	−14.6	56.4	8 44.7	1.85	1 36	3.1	15 36	0.6
16	11 6 43	121	+ 3 54.2	−15.8	57.2	9 28.9	1.85	2 51	3.2	15 50	0.6
17	11 55 49	125	− 2 33.8	−16.4	58.0	10 14.0	1.91	4 8	3.3	16 4	0.6
18	12 46 57	132	− 9 5.9	−16.1	58.8	11 1.0	2.02	5 28	3.4	16 20	0.7
19	13 41 23	141	−15 19.4	−14.8	59.4	11 51.4	2.18	6 52	3.6	16 38	0.9
20	14 40 8	153	−20 46.6	−12.2	59.8	12 46.0	2.38	8 19	3.7	17 2	1.2
21	15 43 32	164	−24 56.4	− 8.4	60.0	13 45.3	2.56	9 48	3.6	17 35	1.7
22	16 50 38	171	−27 20.3	− 3.5	60.0	14 48.3	2.67	11 11	3.2	18 22	2.3
23	17 59 4	170	−27 40.9	+ 1.8	59.8	15 52.6	2.66	12 20	2.5	19 26	3.0
24	19 5 48	163	−25 58.5	+ 6.6	59.5	16 55.2	2.54	13 12	1.9	20 44	3.4
25	20 8 36	151	−22 30.7	+10.5	59.0	17 53.9	2.35	13 49	1.3	22 9	3.5
26	21 6 37	139	−17 43.4	+13.2	58.5	18 47.9	2.15	14 14	0.9	23 33	3.4
27	22 0 16	130	−12 3.3	+14.9	58.0	19 37.4	1.99	14 34	0.8	—	—
28	22 50 39	123	− 5 54.0	+15.7	57.4	20 23.8	1.88	14 50	0.6	0 54	3.3
29	23 39 2	120	+ 0 24.8	+15.7	56.9	21 8.1	1.83	15 4	0.6	2 12	3.2
30	0 26 42	119	+ 6 36.2	+15.1	56.4	21 51.7	1.82	15 17	0.6	3 28	3.1
31	0 14 45	121	+12 24.7	+13.8	55.9	22 35.7	1.85	15 31	0.6	4 43	3.1
Nov. 1	2 4 7	126	+17 35.5	+12.0	55.4	23 21.0	1.93	15 47	0.8	5 57	3.1
2	—	—	—	—	—	—	—	16 7	0.9	7 12	3.1
3	2 55 22	131	+21 54.2	+ 9.5	55.0	0 8.1	2.01	16 32	1.2	8 26	3.0
4	3 48 37	135	+25 7.8	+ 6.5	54.6	0 57.3	2.08	17 5	1.6	9 36	2.8
5	4 43 28	138	+27 5.6	+ 3.2	54.3	1 48.1	2.14	17 48	2.0	10 39	2.4
6	5 39 0	139	+27 41.5	− 0.2	54.1	2 39.5	2.14	18 41	2.4	11 31	1.9
7	6 34 4	136	+26 54.8	− 3.6	54.1	3 30.5	2.10	19 44	2.7	12 12	1.5
8	7 27 38	131	+24 50.1	− 6.7	54.2	4 20.0	2.02	20 52	2.9	12 43	1.1
9	8 19 9	126	+21 35.8	− 9.4	54.5	5 7.5	1.93	22 4	3.0	13 6	0.9
10	9 8 39	121	+17 21.9	−11.7	54.9	5 52.9	1.86	23 16	3.0	13 25	0.7
11	9 56 36	119	+12 18.8	−13.5	55.5	6 36.8	1.81	—	—	13 41	0.6
12	10 43 50	118	+ 6 36.8	−14.9	56.3	7 19.9	1.80	0 29	3.1	13 55	0.6
13	11 31 26	121	+ 0 27.0	−15.8	57.2	8 3.5	1.84	1 43	3.1	14 8	0.6
14	12 20 42	127	− 5 57.1	−16.1	58.2	8 48.7	1.94	3 0	3.3	14 23	0.7
15	13 13 3	136	−12 17.6	−15.5	59.1	9 37.0	2.10	4 20	3.5	14 40	0.8
16	14 9 49	149	−18 9.9	−13.7	59.9	10 29.6	2.30	5 46	3.7	15 0	1.0
17	15 11 56	162	−23 2.8	−10.5	60.6	11 27.7	2.53	7 16	3.7	15 30	1.5
18	16 19 13	173	−26 21.6	− 5.9	60.9	12 30.8	2.71	8 45	3.5	16 12	2.1
19	17 29 39	177	−27 37.4	− 0.4	60.9	13 37.1	2.78	10 3	2.9	17 11	2.8
20	18 39 48	172	−26 39.8	+ 5.1	60.6	14 43.1	2.69	11 4	2.2	18 27	3.4
21	19 46 23	160	−23 41.3	+ 9.6	60.0	15 45.6	2.50	11 48	1.5	19 52	3.6
22	20 47 39	146	−19 10.2	+12.8	59.4	16 42.8	2.27	12 18	1.1	21 19	3.6
23	21 43 37	134	−13 38.2	+14.7	58.6	17 34.7	2.06	12 39	0.8	22 43	3.4
24	22 35 20	125	− 7 33.2	+15.6	57.8	18 22.3	1.92	12 56	0.7	—	—

Mond 1933

Tag	0h Welt-Zeit									
	Scheinbare Rektaszension		Scheinbare Deklination		Parallaxe		Halbmesser		Länge	Breite
1933	h m s	m s	° ′	° ′	′ ″	″	′ ″	″	°	°
Nov. 24	21 57 21	49 18	−12 5.9	5 58.0	58 22.8	44.6	15 55.9	12.2	327.257	+0.352
25	22 46 39	47 0	− 6 7.9	6 5.2	57 38.2	41.9	15 43.7	11.4	340.754	+1.518
26	23 33 39	45 59	− 0 2.7	5 57.5	56 56.3	37.8	15 32.3	10.3	353.936	+2.575
27	0 19 38	46 3	+ 5 54.8	5 36.6	56 18.5	33.2	15 22.0	9.0	6.851	+3.477
28	1 5 41	47 3	+11 31.4	5 3.5	55 45.3	28.6	15 13.0	7.8	19.542	+4.188
29	1 52 44	48 42	+16 34.9	4 18.5	55 16.7	24.2	15 5.2	6.6	32.046	+4.686
30	2 41 26	50 38	+20 53.4	3 21.9	54 52.5	19.9	14 58.6	5.4	44.389	+4.956
Dez. 1	3 32 4	52 23	+24 15.3	2 15.0	54 32.6	15.6	14 53.2	4.3	56.594	+4.995
2	4 24 27	53 26	+26 30.3	1 0.7	54 17.0	11.1	14 48.9	3.0	68.674	+4.807
3	5 17 53	53 28	+27 31.0	0 16.4	54 5.9	6.1	14 45.9	1.6	80.645	+4.408
4	6 11 21	52 26	+27 14.6	1 31.2	53 59.8	0.4	14 44.3	0.1	92.528	+3.818
5	7 3 47	50 38	+25 43.4	2 39.4	53 59.4	6.4	14 44.2	1.7	104.351	+3.064
6	7 54 25	48 31	+23 4.0	3 38.3	54 5.8	14.1	14 45.9	3.8	116.154	+2.177
7	8 42 56	46 36	+19 25.7	4 27.0	54 19.9	22.5	14 49.7	6.2	127.990	+1.191
8	9 29 32	45 14	+14 58.7	5 5.6	54 42.4	31.6	14 55.9	8.6	139.925	+0.142
9	10 14 46	44 44	+ 9 53.1	5 34.6	55 14.0	40.6	15 4.5	11.0	152.036	−0.931
10	10 59 30	45 15	+ 4 18.5	5 53.5	55 54.6	48.9	15 15.5	13.3	164.409	−1.984
11	11 44 45	46 58	− 1 35.0	6 0.6	56 43.5	55.2	15 28.8	15.1	177.129	−2.969
12	12 31 43	49 58	− 7 35.6	5 52.6	57 38.7	58.6	15 43.9	16.0	190.276	−3.832
13	13 21 41	54 16	−13 28.2	5 24.0	58 37.3	57.3	15 59.9	15.6	203.908	−4.511
14	14 15 57	59 26	−18 52.2	4 28.7	59 34.6	50.5	16 15.5	13.7	218.045	−4.945
15	15 15 23	64 33	−23 20.9	3 3.0	60 25.1	37.9	16 29.2	10.4	232.658	−5.077
16	16 19 56	68 5	−26 23.9	1 10.2	61 3.0	20.4	16 39.6	5.5	247.658	−4.869
17	17 28 1	68 38	−27 34.1	0 55.8	61 23.4	0.0	16 45.1	0.0	262.898	−4.315
18	18 36 39	65 58	−26 38.3	2 54.1	61 23.4	19.9	16 45.1	5.4	278.196	−3.450
19	19 42 37	61 19	−23 44.2	4 28.2	61 3.5	36.7	16 39.7	10.0	293.369	−2.345
20	20 43 56	56 15	−19 16.0	5 31.1	60 26.8	48.5	16 29.7	13.2	308.260	−1.096
21	21 40 11	51 55	−13 44.9	6 4.7	59 38.3	54.5	16 16.5	14.9	322.764	+0.196
22	22 32 6	48 48	− 7 40.2	6 14.6	58 43.8	55.4	16 1.6	15.1	336.830	+1.440
23	23 20 54	46 59	− 1 25.6	6 6.8	57 48.4	52.4	15 46.5	14.2	350.456	+2.563
24	0 7 53	46 26	+ 4 41.2	5 45.0	56 56.0	46.6	15 32.3	12.8	3.676	+3.515
25	0 54 19	46 54	+10 26.2	5 11.7	56 9.4	39.6	15 19.5	10.7	16.541	+4.262
26	1 41 13	48 11	+15 37.9	4 27.6	55 29.8	32.1	15 8.8	8.8	29.114	+4.784
27	2 29 24	49 56	+20 5.5	3 33.1	54 57.7	24.6	15 0.0	6.7	41.453	+5.072
28	3 19 20	51 44	+23 38.6	2 29.0	54 33.1	17.7	14 53.3	4.8	53.614	+5.126
29	4 11 4	53 2	+26 7.6	1 17.1	54 15.4	11.5	14 48.5	3.1	65.644	+4.952
30	5 4 6	53 26	+27 24.7	0 0.8	54 3.9	5.9	14 45.4	1.6	77.579	+4.562
31	5 57 32	52 47	+27 25.5	1 14.9	53 58.0	0.6	14 43.8	0.2	89.452	+3.976
32	6 50 19		+26 10.6		53 57.4		14 43.6		101.290	+3.219

Tag	Obere Kulmination in Greenwich							0h Länge, + 50° Breite			
	AR.	Änderung für 1h westl. Länge	Dekl.	Änderung für 1h westl. Länge	Parallaxe	Zeit des Durchgangs	Änderung für 1h westl. Länge	Aufgang	Änderung für 1h westl. Länge	Untergang	Änderung für 1h westl. Länge
1933	h m s	s	° ′	′	′	h m	m	h m	m	h m	m
Nov. 24	22 35 20	125	− 7 33.2	+15.6	57.8	18 22.3	1.92	12 56	0.7	—	—
25	23 24 13	120	− 1 16.8	+15.7	57.1	19 7.1	1.83	13 11	0.6	0 2	3.3
26	0 11 42	118	+ 4 54.0	+15.1	56.4	19 50.5	1.80	13 24	0.6	1 19	3.1
27	0 59 3	119	+10 44.9	+14.0	55.8	20 33.8	1.82	13 38	0.6	2 33	3.1
28	1 47 22	123	+16 2.8	+12.4	55.3	21 18.1	1.88	13 54	0.7	3 46	3.1
29	2 37 26	128	+20 34.6	+10.2	54.9	22 4.1	1.96	14 12	0.9	5 0	3.1
30	3 29 38	133	+24 7.3	+ 7.5	54.6	22 52.2	2.05	14 35	1.1	6 13	3.0
Dez. 1	4 23 48	137	+26 29.1	+ 4.3	54.3	23 42.3	2.11	15 5	1.4	7 24	2.8
2	—	—	—	—	—	—	—	15 44	1.9	8 29	2.5
3	5 19 8	139	+27 31.5	+ 0.9	54.1	0 33.6	2.15	16 34	2.3	9 25	2.1
4	6 14 29	137	+27 11.2	− 2.5	54.0	1 24.8	2.12	17 34	2.6	10 10	1.6
5	7 8 37	133	+25 31.2	− 5.7	54.0	2 14.9	2.05	18 41	2.9	10 44	1.2
6	8 0 41	127	+22 39.3	− 8.5	54.1	3 2.9	1.95	19 51	2.9	11 9	0.9
7	8 50 27	122	+18 46.3	−10.8	54.4	3 48.6	1.86	21 2	3.0	11 29	0.8
8	9 38 10	117	+14 3.6	−12.7	54.8	4 32.2	1.79	22 13	3.0	11 46	0.6
9	10 24 33	115	+ 8 42.2	−14.1	55.4	5 14.6	1.75	23 25	3.0	12 0	0.6
10	11 10 36	116	+ 2 52.4	−15.0	56.1	5 56.5	1.77	—	—	12 13	0.5
11	11 57 33	120	− 3 14.8	−15.5	57.0	6 39.4	1.82	0 38	3.1	12 26	0.6
12	12 46 45	127	− 9 26.1	−15.3	57.9	7 24.6	1.95	1 54	3.3	12 42	0.7
13	13 39 45	139	−15 23.7	−14.3	59.0	8 13.5	2.14	3 15	3.5	13 0	0.9
14	14 37 55	153	−20 42.5	−12.1	59.9	9 7.6	2.38	4 40	3.6	13 24	1.2
15	15 42 3	168	−24 50.3	− 8.3	60.7	10 7.6	2.62	6 9	3.6	13 58	1.8
16	16 51 28	178	−27 12.0	− 3.3	61.2	11 12.9	2.79	7 34	3.3	14 49	2.5
17	18 3 28	180	−27 21.1	+ 2.5	61.4	12 20.8	2.82	8 46	2.6	15 58	3.2
18	19 14 7	172	−25 14.0	+ 7.9	61.2	13 27.3	2.69	9 39	1.9	17 23	3.7
19	20 20 15	158	−21 11.6	+12.0	60.7	14 29.3	2.47	10 16	1.3	18 54	3.8
20	21 20 39	144	−15 48.4	+14.6	59.9	15 25.6	2.23	10 41	0.9	20 23	3.6
21	22 15 48	132	− 9 39.7	+15.9	59.0	16 16.7	2.04	11 1	0.8	21 47	3.4
22	23 7 2	125	− 3 13.7	+16.1	58.1	17 3.8	1.90	11 17	0.6	23 6	3.2
23	23 55 52	120	+ 3 8.2	+15.6	57.2	17 48.6	1.84	11 31	0.6	—	—
24	0 43 45	120	+ 9 10.3	+14.5	56.3	18 32.4	1.83	11 45	0.6	0 22	3.1
25	1 31 54	122	+14 39.7	+12.9	55.6	19 16.5	1.86	12 0	0.7	1 37	3.1
26	2 21 19	126	+19 24.7	+10.8	55.0	20 1.9	1.93	12 17	0.8	2 50	3.1
27	3 12 37	131	+23 13.9	+ 8.2	54.6	20 49.1	2.01	12 38	1.0	4 4	3.0
28	4 5 54	135	+25 56.1	+ 5.2	54.3	21 38.3	2.08	13 6	1.3	5 15	2.9
29	5 0 43	138	+27 22.0	+ 1.9	54.1	22 29.0	2.13	13 42	1.7	6 22	2.6
30	5 56 4	138	+27 26.5	− 1.5	54.0	23 20.3	2.13	14 29	2.2	7 20	2.2
31	—	—	—	—	—	—	—	15 26	2.5	8 8	1.8
32	6 50 43	135	+26 9.7	− 4.8	54.0	0 10.9	2.08	16 31		8 45	

Phasen des Mondes

1933		Welt-Zeit h m		1933		Welt-Zeit h m	
Jan.	3	16 23.6	Erstes Viertel	Juli	7	11 50.6	Vollmond
	11	20 35.6	Vollmond		14	12 23.6	Letztes Viertel
	19	6 15.4	Letztes Viertel		22	16 3.1	Neumond
	25	23 19.7	Neumond		30	4 43.6	Erstes Viertel
Febr.	2	13 16.3	Erstes Viertel	Aug.	5	19 31.6	Vollmond
	10	13 0.5	Vollmond		13	3 49.3	Letztes Viertel
	17	14 8.4	Letztes Viertel		21	5 47.9	Neumond
	24	12 43.9	Neumond		28	10 13.3	Erstes Viertel
März	4	10 23.3	Erstes Viertel	Sept.	4	5 4.4	Vollmond
	12	2 45.7	Vollmond		11	21 30.0	Letztes Viertel
	18	21 4.8	Letztes Viertel		19	18 20.9	Neumond
	26	3 20.3	Neumond		26	15 36.3	Erstes Viertel
April	3	5 56.4	Erstes Viertel	Okt.	3	17 7.6	Vollmond
	10	13 37.6	Vollmond		11	16 45.5	Letztes Viertel
	17	4 17.4	Letztes Viertel		19	5 44.7	Neumond
	24	18 38.3	Neumond		25	22 20.7	Erstes Viertel
Mai	2	22 39.1	Erstes Viertel	Nov.	2	7 59.2	Vollmond
	9	22 4.4	Vollmond		10	12 17.8	Letztes Viertel
	16	12 50.4	Letztes Viertel		17	16 23.8	Neumond
	24	10 6.9	Neumond		24	7 38.4	Erstes Viertel
Juni	1	11 52.9	Erstes Viertel	Dez.	2	1 30.9	Vollmond
	8	5 4.7	Vollmond		10	6 23.6	Letztes Viertel
	14	23 25.5	Letztes Viertel		17	2 52.7	Neumond
	23	1 22.3	Neumond		23	20 8.8	Erstes Viertel
	30	21 40.5	Erstes Viertel		31	20 53.9	Vollmond

Mond in Erdnähe

1933	Welt-Zeit h
Jan. 23	2.8
Febr. 18	10.7
März 15	17.5
April 12	11.2
Mai 10	17.7
Juni 8	3.4
Juli 6	12.4
Aug. 3	16.6
Aug. 31	5.5
Sept. 25	10.5
Okt. 22	0.4
Nov. 19	1.3
Dez. 17	12.1

Mond in Erdferne

1933	Welt-Zeit h
Jan. 7	1.6
Febr. 3	21.2
März 3	18.1
März 31	13.2
April 28	4.0
Mai 25	11.2
Juni 21	14.3
Juli 18	23.5
Aug. 15	14.8
Sept. 12	9.1
Okt. 10	4.9
Nov. 6	23.7
Dez. 4	13.3
Dez. 31	15.2

Tag		Scheinbare Rektaszension (0h Welt-Zeit)	Diff.	Scheinbare Deklination (0h Welt-Zeit)	Diff.	log Δ (0h Welt-Zeit)	Diff.	Obere Kulmination in Greenwich
1933		h m s	m s	° ′ ″	′ ″			h m
Jan.	0	17 9 49.67	5 35.27	−21 51 42.7	14 45.4	0.063 0876	6 1768	10 33.7
	1	17 15 24.94	5 42.19	22 6 28.1	14 3.5	0.069 2644	5 8651	10 35.4
	2	17 21 7.13	5 48.51	22 20 31.6	13 17.1	0.075 1295	5 5667	10 37.2
	3	17 26 55.64	5 54.33	22 33 48.7	12 26.9	0.080 6962	5 2810	10 39.1
	4	17 32 49.97	5 59.66	22 46 15.6	11 33.3	0.085 9772	5 0074	10 41.1
	5	17 38 49.63	6 4.59	22 57 48.9	10 36.4	0.090 9846	4 7454	10 43.2
	6	17 44 54.22	6 9.13	−23 8 25.3	9 36.7	0.095 7300	4 4945	10 45.4
	7	17 51 3.35	6 13.36	23 18 2.0	8 34.6	0.100 2245	4 2535	10 47.6
	8	17 57 16.71	6 17.26	23 26 36.6	7 30.0	0.104 4780	4 0221	10 49.9
	9	18 3 33.97	6 20.88	23 34 6.6	6 23.3	0.108 5001	3 7997	10 52.3
	10	18 9 54.85	6 24.25	23 40 29.9	5 14.7	0.112 2998	3 5853	10 54.8
	11	18 16 19.10	6 27.39	23 45 44.6	4 4.3	0.115 8851	3 3784	10 57.3
	12	18 22 46.49	6 30.31	−23 49 48.9	2 52.3	0.119 2635	3 1787	10 59.8
	13	18 29 16.80	6 33.02	23 52 41.2	1 38.7	0.122 4422	2 9852	11 2.4
	14	18 35 49.82	6 35.55	23 54 19.9	0 23.7	0.125 4274	2 7973	11 5.0
	15	18 42 25.37	6 37.91	23 54 43.6	0 52.6	0.128 2247	2 6146	11 7.7
	16	18 49 3.28	6 40.09	23 53 51.0	2 10.1	0.130 8393	2 4365	11 10.4
	17	18 55 43.37	6 42.13	23 51 40.9	3 28.9	0.133 2758	2 2624	11 13.2
	18	19 2 25.50	6 44.01	−23 48 12.0	4 48.6	0.135 5382	2 0919	11 15.9
	19	19 9 9.51	6 45.75	23 43 23.4	6 9.4	0.137 6301	1 9243	11 18.7
	20	19 15 55.26	6 47.36	23 37 14.0	7 31.1	0.139 5544	1 7590	11 21.6
	21	19 22 42.62	6 48.85	23 29 42.9	8 53.7	0.141 3134	1 5958	11 24.4
	22	19 29 31.47	6 50.23	23 20 49.2	10 17.0	0.142 9092	1 4341	11 27.3
	23	19 36 21.70	6 51.47	23 10 32.2	11 41.3	0.144 3433	1 2731	11 30.2
	24	19 43 13.17	6 52.62	−22 58 50.9	13 6.2	0.145 6164	1 1127	11 33.2
	25	19 50 5.79	6 53.65	22 45 44.7	14 31.7	0.146 7291	9521	11 36.1
	26	19 56 59.44	6 54.59	22 31 13.0	15 57.9	0.147 6812	7910	11 39.1
	27	20 3 54.03	6 55.44	22 15 15.1	17 24.7	0.148 4722	6288	11 42.1
	28	20 10 49.47	6 56.21	21 57 50.4	18 51.9	0.149 1010	4646	11 45.1
	29	20 17 45.68	6 56.89	21 38 58.5	20 19.7	0.149 5656	2981	11 48.1
	30	20 24 42.57	6 57.49	−21 18 38.8	21 47.9	0.149 8637	1286	11 51.1
	31	20 31 40.06	6 58.02	20 56 50.9	23 16.4	0.149 9923	447	11 54.1
Febr.	1	20 38 38.08	6 58.47	20 33 34.5	24 45.3	0.149 9476	2223	11 57.1
	2	20 45 36.55	6 58.86	20 8 49.2	26 14.5	0.149 7253	4052	12 0.2
	3	20 52 35.41	6 59.19	19 42 34.7	27 43.8	0.149 3201	5941	12 3.2
	4	20 59 34.60	6 59.43	19 14 50.9	29 13.2	0.148 7260	7901	12 6.3
	5	21 6 34.03	6 59.62	−18 45 37.7	30 42.7	0.147 9359	9940	12 9.4
	6	21 13 33.65	6 59.71	18 14 55.0	32 11.9	0.146 9419	1 2066	12 12.4
	7	21 20 33.36	6 59.73	17 42 43.1	33 41.0	0.145 7353	1 4292	12 15.5
	8	21 27 33.09	6 59.66	17 9 2.1	35 9.5	0.144 3061	1 6631	12 18.5
	9	21 34 32.75	6 59.47	16 33 52.6	36 37.4	0.142 6430	1 9092	12 21.6
	10	21 41 32.22		−15 57 15.2		0.140 7338		12 24.6

Merkur 1933

Tag		0h Welt-Zeit Scheinbare Rektaszension	Diff.	Scheinbare Deklination	Diff.	log Δ	Diff.	Obere Kulmination in Greenwich
1933		h m s	m s	° ′ ″	′ ″			h m
Febr.	10	21 41 32.22	6 59.16	−15 57 15.2	38 4.6	0.140 7338	2 1689	12 24.6
	11	21 48 31.38	6 58.71	15 19 10.6	39 30.4	0.138 5649	2 4436	12 27.7
	12	21 55 30.09	6 58.09	14 39 40.2	40 54.8	0.136 1213	2 7345	12 30.7
	13	22 2 28.18	6 57.24	13 58 45.4	42 17.3	0.133 3868	3 0431	12 33.7
	14	22 9 25.42	6 56.16	13 16 28.1	43 37.4	0.130 3437	3 3711	12 36.7
	15	22 16 21.58	6 54.77	12 32 50.7	44 54.7	0.126 9726	3 7195	12 39.7
	16	22 23 16.35	6 53.02	−11 47 56.0	46 8.1	0.123 2531	4 0897	12 42.7
	17	22 30 9.37	6 50.84	11 1 47.9	47 17.2	0.119 1634	4 4830	12 45.6
	18	22 37 0.21	6 48.15	10 14 30.7	48 21.1	0.114 6804	4 9003	12 48.5
	19	22 43 48.36	6 44.85	9 26 9.6	49 18.7	0.109 7801	5 3420	12 51.3
	20	22 50 33.21	6 40.83	8 36 50.9	50 9.0	0.104 4381	5 8084	12 54.1
	21	22 57 14.04	6 35.99	7 46 41.9	50 50.6	0.098 6297	6 2992	12 56.8
	22	23 3 50.03	6 30.18	− 6 55 51.3	51 22.3	0.092 3305	6 8133	12 59.4
	23	23 10 20.21	6 23.30	6 4 29.0	51 42.8	0.085 5172	7 3489	13 1.9
	24	23 16 43.51	6 15.17	5 12 46.2	51 50.2	0.078 1683	7 9030	13 4.3
	25	23 22 58.68	6 5.66	4 20 56.0	51 43.3	0.070 2653	8 4716	13 6.6
	26	23 29 4.34	5 54.65	3 29 12.7	51 20.7	0.061 7937	9 0497	13 8.6
	27	23 34 58.99	5 41.98	2 37 52.0	50 36.0	0.052 7440	9 6310	13 10.5
	28	23 40 40.97	5 27.58	− 1 47 16.0	49 48.1	0.043 1130	10 2080	13 12.1
März	1	23 46 8.55	5 11.34	0 57 27.9	48 25.8	0.032 9050	10 7721	13 13.5
	2	23 51 19.89	4 53.21	− 0 9 2.1	46 48.6	0.022 1329	11 3140	13 14.6
	3	23 56 13.10	4 33.19	+ 0 37 46.5	44 51.1	0.010 8189	11 8237	13 15.3
	4	0 0 46.29	4 11.28	1 22 37.6	42 33.2	9.998 9952	12 2908	13 15.7
	5	0 4 57.57	3 47.57	2 5 10.8	39 55.2	9.986 7044	12 7044	13 15.8
	6	0 8 45.14	3 22.17	+ 2 45 6.0	36 57.6	9.974 0000	13 0541	13 15.4
	7	0 12 7.31	2 55.25	3 22 3.6	33 41.5	9.960 9459	13 3302	13 14.6
	8	0 15 2.56	2 27.00	3 55 45.1	30 7.9	9.947 6157	13 5225	13 13.3
	9	0 17 29.56	1 57.69	4 25 53.0	26 18.3	9.934 0932	13 6222	13 11.5
	10	0 19 27.25	1 27.63	4 52 11.3	22 14.3	9.920 4710	13 6210	13 9.3
	11	0 20 54.88	0 57.15	5 14 25.6	17 58.1	9.906 8500	13 5122	13 6.5
	12	0 21 52.03	0 26.65	+ 5 32 23.7	13 31.9	9.893 3378	13 2895	13 3.3
	13	0 22 18.68	0 3.45	5 45 55.6	8 58.2	9.880 0483	12 9487	12 59.5
	14	0 22 15.23	0 32.67	5 54 53.8	4 20.4	9.867 0996	12 4872	12 55.3
	15	0 21 42.56	1 0.52	5 59 14.2	0 18.0	9.854 6124	11 9045	12 50.6
	16	0 20 42.04	1 26.51	5 58 56.2	4 53.1	9.842 7079	11 2027	12 45.4
	17	0 19 15.53	1 50.14	5 54 3.1	9 20.4	9.831 5052	10 3871	12 39.8
	18	0 17 25.39	2 10.94	+ 5 44 42.7	13 35.1	9.821 1181	9 4661	12 33.9
	19	0 15 14.45	2 28.48	5 31 7.6	17 32.4	9.811 6520	8 4520	12 27.6
	20	0 12 45.97	2 42.42	5 13 35.2	21 7.7	9.803 2000	7 3592	12 21.1
	21	0 10 3.55	2 52.53	4 52 27.5	24 16.6	9.795 8408	6 2060	12 14.4
	22	0 7 11.02	2 58.67	4 28 10.9	26 55.5	9.789 6348	5 0125	12 7.5
	23	0 4 12.35		+ 4 1 15.4		9.784 6223		12 0.6

Merkur 1933

Tag	Scheinbare Rektaszension (0h Welt-Zeit) h m s	Diff. m s	Scheinbare Deklination (0h Welt-Zeit) ° ′ ″	Diff. ′ ″	log Δ	Diff.	Obere Kulmination in Greenwich h m
1933 März 23	0 4 12.35	3 0.82	+ 4 1 15.4	29 1.4	9.784 6223	3 8005	12 0.6
24	0 1 11.53	2 59.09	3 32 14.0	30 32.9	9.780 8218	2 5912	11 53.7
25	23 58 12.44	2 53.71	3 1 41.1	31 29.5	9.778 2306	1 4056	11 46.8
26	23 55 18.73	2 44.97	2 30 11.6	31 51.8	9.776 8250	2625	11 40.1
27	23 52 33.76	2 33.30	1 58 19.8	31 41.4	9.776 5625	8224	11 33.5
28	23 50 0.46	2 19.13	1 26 38.4	31 1.3	9.777 3849	1 8354	11 27.1
29	23 47 41.33	2 2.90	+ 0 55 37.1	29 54.5	9.779 2203	2 7677	11 21.0
30	23 45 38.43	1 45.07	+ 0 25 42.6	28 24.6	9.781 9880	3 6134	11 15.2
31	23 43 53.36	1 26.09	− 0 2 42.0	26 35.6	9.785 6014	4 3698	11 9.7
April 1	23 42 27.27	1 6.32	0 29 17.6	24 31.3	9.789 9712	5 0373	11 4.5
2	23 41 20.95	0 46.18	0 53 48.9	22 14.9	9.795 0085	5 6181	10 59.6
3	23 40 34.77	0 25.92	1 16 3.8	19 50.0	9.800 6266	6 1165	10 55.1
4	23 40 8.85	0 5.81	− 1 35 53.8	17 19.1	9.806 7431	6 5386	10 50.9
5	23 40 3.04	0 13.95	1 53 12.9	14 45.0	9.813 2817	6 8900	10 47.0
6	23 40 16.99	0 33.18	2 7 57.9	12 9.5	9.820 1717	7 1775	10 43.4
7	23 40 50.17	0 51.80	2 20 7.4	9 34.1	9.827 3492	7 4083	10 40.2
8	23 41 41.97	1 9.71	2 29 41.5	7 0.3	9.834 7575	7 5888	10 37.2
9	23 42 51.68	1 26.85	2 36 41.8	4 29.0	9.842 3463	7 7246	10 34.6
10	23 44 18.53	1 43.22	− 2 41 10.8	2 1.0	9.850 0709	7 8219	10 32.2
11	23 46 1.75	1 58.79	2 43 11.8	0 23.3	9.857 8928	7 8860	10 30.1
12	23 48 0.54	2 13.56	2 42 48.5	2 43.1	9.865 7788	7 9217	10 28.3
13	23 50 14.10	2 27.59	2 40 5.4	4 58.6	9.873 7005	7 9329	10 26.7
14	23 52 41.69	2 40.85	2 35 6.8	7 9.8	9.881 6334	7 9238	10 25.3
15	23 55 22.54	2 53.43	2 27 57.0	9 16.2	9.889 5572	7 8974	10 24.1
16	23 58 15.97	3 5.34	− 2 18 40.8	11 18.0	9.897 4546	7 8566	10 23.1
17	0 1 21.31	3 16.63	2 7 22.8	13 15.4	9.905 3112	7 8040	10 22.4
18	0 4 37.94	3 27.36	1 54 7.4	15 8.3	9.913 1152	7 7417	10 21.8
19	0 8 5.30	3 37.54	1 38 59.1	16 56.9	9.920 8569	7 6717	10 21.4
20	0 11 42.84	3 47.27	1 22 2.2	18 41.6	9.928 5286	7 5951	10 21.1
21	0 15 30.11	3 56.55	1 3 20.6	20 22.1	9.936 1237	7 5131	10 21.0
22	0 19 26.66	4 5.45	− 0 42 58.5	21 58.9	9.943 6368	7 4274	10 21.1
23	0 23 32.11	4 14.00	− 0 20 59.6	23 31.9	9.951 0642	7 3383	10 21.3
24	0 27 46.11	4 22.26	+ 0 2 32.3	25 1.5	9.958 4025	7 2463	10 21.7
25	0 32 8.37	4 30.27	0 27 33.8	26 27.5	9.965 6488	7 1521	10 22.2
26	0 36 38.64	4 38.05	0 54 1.3	27 50.3	9.972 8009	7 0561	10 22.8
27	0 41 16.69	4 45.69	1 21 51.6	29 9.9	9.979 8570	6 9582	10 23.5
28	0 46 2.38	4 53.17	+ 1 51 1.5	30 26.5	9.986 8152	6 8587	10 24.4
29	0 50 55.55	5 0.56	2 21 28.0	31 39.9	9.993 6739	6 7575	10 25.4
30	0 55 56.11	5 7.91	2 53 7.9	32 50.4	0.000 4314	6 6541	10 26.5
Mai 1	1 1 4.02	5 15.20	3 25 58.3	33 57.9	0.007 0855	6 5487	10 27.8
2	1 6 19.22	5 22.52	3 59 56.2	35 2.6	0.013 6342	6 4409	10 29.1
3	1 11 41.74		+ 4 34 58.8		0.020 0751		10 30.6

Tag	0h Welt-Zeit: Scheinbare Rektaszension	Diff.	0h Welt-Zeit: Scheinbare Deklination	Diff.	log Δ	Diff.	Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Mai 3	1 11 41.74	5 29.89	+ 4 34 58.8	36 4.2	0.020 0751	6 3303	10 30.6
4	1 17 11.63	5 37.31	5 11 3.0	37 2.9	0.026 4054	6 2158	10 32.2
5	1 22 48.94	5 44.85	5 48 5.9	37 58.7	0.032 6212	6 0973	10 34.0
6	1 28 33.79	5 52.53	6 26 4.6	38 51.1	0.038 7185	5 9740	10 35.8
7	1 34 26.32	6 0.36	7 4 55.7	39 40.5	0.044 6925	5 8449	10 37.8
8	1 40 26.68	6 8.38	7 44 36.2	40 26.4	0.050 5374	5 7093	10 39.9
9	1 46 35.06	6 16.61	+ 8 25 2.6	41 8.6	0.056 2467	5 5659	10 42.2
10	1 52 51.67	6 25.05	9 6 11.2	41 46.9	0.061 8126	5 4139	10 44.6
11	1 59 16.72	6 33.76	9 47 58.1	42 21.2	0.067 2265	5 2518	10 47.1
12	2 5 50.48	6 42.73	10 30 19.3	42 50.8	0.072 4783	5 0782	10 49.8
13	2 12 33.21	6 51.96	11 13 10.1	43 15.5	0.077 5565	4 8921	10 52.7
14	2 19 25.17	7 1.43	11 56 25.6	43 34.8	0.082 4486	4 6918	10 55.7
15	2 26 26.60	7 11.16	+12 40 0.4	43 48.1	0.087 1404	4 4758	10 58.8
16	2 33 37.76	7 21.13	13 23 48.5	43 54.7	0.091 6162	4 2426	11 2.2
17	2 40 58.89	7 31.29	14 7 43.2	43 54.3	0.095 8588	3 9911	11 5.7
18	2 48 30.18	7 41.61	14 51 37.5	43 45.9	0.099 8499	3 7197	11 9.3
19	2 56 11.79	7 52.04	15 35 23.4	43 28.7	0.103 5696	3 4270	11 13.2
20	3 4 3.83	8 2.48	16 18 52.1	43 2.3	0.106 9966	3 1124	11 17.2
21	3 12 6.31	8 12.86	+17 1 54.4	42 25.7	0.110 1090	2 7750	11 21.4
22	3 20 19.17	8 23.04	17 44 20.1	41 38.2	0.112 8840	2 4145	11 25.7
23	3 28 42.21	8 32.92	18 25 58.3	40 39.2	0.115 2985	2 0315	11 30.3
24	3 37 15.13	8 42.36	19 6 37.5	39 28.1	0.117 3300	1 6266	11 35.0
25	3 45 57.49	8 51.19	19 46 5.6	38 4.8	0.118 9566	1 2018	11 39.8
26	3 54 48.68	8 59.23	20 24 10.4	36 29.3	0.120 1584	7591	11 44.8
27	4 3 47.91	9 6.36	+21 0 39.7	34 41.5	0.120 9175	3015	11 49.9
28	4 12 54.27	9 12.41	21 35 21.2	32 41.7	0.121 2190	1673	11 55.2
29	4 22 6.68	9 17.23	22 8 2.9	30 31.3	0.121 0517	6426	12 0.5
30	4 31 23.91	9 20.73	22 38 34.2	28 11.0	0.120 4091	1 1205	12 5.9
31	4 40 44.64	9 22.83	23 6 45.2	25 42.1	0.119 2886	1 5961	12 11.3
Juni 1	4 50 7.47	9 23.45	23 32 27.3	23 6.3	0.117 6925	2 0647	12 16.8
2	4 59 30.92	9 22.61	+23 55 33.6	20 25.3	0.115 6278	2 5221	12 22.3
3	5 8 53.53	9 20.31	24 15 58.9	17 40.8	0.113 1057	2 9643	12 27.7
4	5 18 13.84	9 16.62	24 33 39.7	14 54.6	0.110 1414	3 3883	12 33.1
5	5 27 30.46	9 11.61	24 48 34.3	12 8.5	0.106 7531	3 7916	12 38.4
6	5 36 42.07	9 5.37	25 0 42.8	9 23.9	0.102 9615	4 1725	12 43.6
7	5 45 47.44	8 58.04	25 10 6.7	6 42.1	0.098 7890	4 5298	12 48.7
8	5 54 45.48	8 49.72	+25 16 48.8	4 4.4	0.094 2592	4 8632	12 53.7
9	6 3 35.20	8 40.52	25 20 53.2	1 31.8	0.089 3960	5 1728	12 58.5
10	6 12 15.72	8 30.58	25 22 25.0	0 54.8	0.084 2232	5 4595	13 3.2
11	6 20 46.30	8 20.00	25 21 30.2	3 15.2	0.078 7637	5 7242	13 7.7
12	6 29 6.30	8 8.89	25 18 15.0	5 28.7	0.073 0395	5 9677	13 12.0
13	6 37 15.19		+25 12 46.3		0.067 0718		13 16.1

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Juni 13	6 37 15.19	7 57.32	+25 12 46.3	7 34.8	0.067 0718	6 1918	13 16.1
14	6 45 12.51	7 45.40	25 5 11.5	9 33.7	0.060 8800	6 3978	13 20.0
15	6 52 57.91	7 33.19	24 55 37.8	11 25.1	0.054 4822	6 5872	13 23.7
16	7 0 31.10	7 20.73	24 44 12.7	13 9.0	0.047 8950	6 7615	13 27.2
17	7 7 51.83	7 8.08	24 31 3.7	14 45.7	0.041 1335	6 9217	13 30.5
18	7 14 59.91	6 55.27	24 16 18.0	16 14.9	0.034 2118	7 0695	13 33.6
19	7 21 55.18	6 42.35	+24 0 3.1	17 37.0	0.027 1423	7 2058	13 36.4
20	7 28 37.53	6 29.32	23 42 26.1	18 52.1	0.019 9365	7 3319	13 39.1
21	7 35 6.85	6 16.21	23 23 34.0	20 0.2	0.012 6046	7 4485	13 41.5
22	7 41 23.06	6 3.00	23 3 33.8	21 1.5	0.005 1561	7 5565	13 43.7
23	7 47 26.06	5 49.72	22 42 32.3	21 56.3	9.997 5996	7 6565	13 45.7
24	7 53 15.78	5 36.36	22 20 36.0	22 44.6	9.989 9431	7 7491	13 47.5
25	7 58 52.14	5 22.90	+21 57 51.4	23 26.5	9.982 1940	7 8347	13 49.0
26	8 4 15.04	5 9.34	21 34 24.9	24 2.1	9.974 3593	7 9133	13 50.3
27	8 9 24.38	4 55.65	21 10 22.8	24 31.5	9.966 4460	7 9853	13 51.4
28	8 14 20.03	4 41.84	20 45 51.3	24 54.7	9.958 4607	8 0505	13 52.2
29	8 19 1.87	4 27.85	20 20 56.6	25 11.8	9.950 4102	8 1084	13 52.8
30	8 23 29.72	4 13.69	19 55 44.8	25 22.9	9.942 3018	8 1591	13 53.2
Juli 1	8 27 43.41	3 59.32	+19 30 21.9	25 27.9	9.934 1427	8 2017	13 53.4
2	8 31 42.73	3 44.72	19 4 54.0	25 26.7	9.925 9410	8 2354	13 53.3
3	8 35 27.45	3 29.87	18 39 27.3	25 19.4	9.917 7056	8 2593	13 53.0
4	8 38 57.32	3 14.73	18 14 7.9	25 5.9	9.909 4463	8 2722	13 52.4
5	8 42 12.05	2 59.28	17 49 2.0	24 46.0	9.901 1741	8 2727	13 51.5
6	8 45 11.33	2 43.52	17 24 16.0	24 19.9	9.892 9014	8 2592	13 50.4
7	8 47 54.85	2 27.42	+16 59 56.1	23 47.2	9.884 6422	8 2297	13 49.1
8	8 50 22.27	2 10.95	16 36 8.9	23 8.0	9.876 4125	8 1823	13 47.4
9	8 52 33.22	1 54.13	16 13 0.9	22 22.0	9.868 2302	8 1144	13 45.5
10	8 54 27.35	1 36.93	15 50 38.9	21 29.1	9.860 1158	8 0231	13 43.3
11	8 56 4.28	1 19.38	15 29 9.8	20 29.4	9.852 0927	7 9056	13 40.8
12	8 57 23.66	1 1.48	15 8 40.4	19 22.7	9.844 1871	7 7589	13 38.0
13	8 58 25.14	0 43.26	+14 49 17.7	18 8.9	9.836 4282	7 5788	13 34.9
14	8 59 8.40	0 24.80	14 31 8.8	16 48.0	9.828 8494	7 3620	13 31.6
15	8 59 33.20	0 6.15	14 14 20.8	15 20.0	9.821 4874	7 1042	13 27.9
16	8 59 39.35	0 12.60	13 59 0.8	13 45.5	9.814 3832	6 8011	13 23.9
17	8 59 26.75	0 31.35	13 45 15.3	12 4.2	9.807 5821	6 4488	13 19.5
18	8 58 55.40	0 49.93	13 33 11.1	10 16.7	9.801 1333	6 0434	13 14.9
19	8 58 5.47	1 8.14	+13 22 54.4	8 23.8	9.795 0899	5 5814	13 10.0
20	8 56 57.33	1 25.82	13 14 30.6	6 26.1	9.789 5085	5 0597	13 4.8
21	8 55 31.51	1 42.73	13 8 4.5	4 24.4	9.784 4488	4 4760	12 59.3
22	8 53 48.78	1 58.58	13 3 40.1	2 19.8	9.779 9728	3 8290	12 53.5
23	8 51 50.20	2 13.09	13 1 20.3	0 13.9	9.776 1438	3 1193	12 47.5
24	8 49 37.11		+13 1 6.4		9.773 0245		12 41.2

Tag		0ʰ Welt-Zeit						Obere Kulmination in Greenwich
		Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933		h m s	m s	° ′ ″	′ ″			h m
Juli	24	8 49 37.11	2 25.99	+13 1 6.4	1 52.0	9.773 0245	2 3486	12 41.2
	25	8 47 11.12	2 36.94	13 2 58.4	3 56.4	9.770 6759	1 5200	12 34.8
	26	8 44 34.18	2 45.69	13 6 54.8	5 57.5	9.769 1559	6391	12 28.2
	27	8 41 48.49	2 51.92	13 12 52.3	7 53.2	9.768 5168	2864	12 21.4
	28	8 38 56.57	2 55.39	13 20 45.5	9 42.1	9.768 8032	1 2481	12 14.6
	29	8 36 1.18	2 55.94	13 30 27.6	11 22.4	9.770 0513	2 2350	12 7.7
	30	8 33 5.24	2 53.40	+13 41 50.0	12 52.6	9.772 2863	3 2349	12 0.9
	31	8 30 11.84	2 47.69	13 54 42.6	14 11.3	9.775 5212	4 2353	11 54.2
Aug.	1	8 27 24.15	2 38.82	14 8 53.9	15 17.4	9.779 7565	5 2231	11 47.6
	2	8 24 45.33	2 26.87	14 24 11.3	16 10.2	9.784 9796	6 1853	11 41.1
	3	8 22 18.46	2 11.96	14 40 21.5	16 49.2	9.791 1649	7 1098	11 34.8
	4	8 20 6.50	1 54.28	14 57 10.7	17 13.9	9.798 2747	7 9854	11 28.9
	5	8 18 12.22	1 34.12	+15 14 24.6	17 24.3	9.806 2601	8 8026	11 23.2
	6	8 16 38.10	1 11.68	15 31 48.9	17 20.7	9.815 0627	9 5537	11 17.9
	7	8 15 26.42	0 47.33	15 49 9.6	17 3.1	9.824 6164	10 2326	11 12.9
	8	8 14 39.09	0 21.36	16 6 12.7	16 32.1	9.834 8490	10 8349	11 8.4
	9	8 14 17.73	0 5.91	16 22 44.8	15 47.8	9.845 6839	11 3577	11 4.3
	10	8 14 23.64	0 34.16	16 38 32.6	14 50.8	9.857 0416	11 7999	11 0.7
	11	8 14 57.80	1 3.10	+16 53 23.4	13 41.4	9.868 8415	12 1615	10 57.6
	12	8 16 0.90	1 32.46	17 7 4.8	12 20.1	9.881 0030	12 4430	10 54.9
	13	8 17 33.36	2 1.94	17 19 24.9	10 46.9	9.893 4460	12 6458	10 52.7
	14	8 19 35.30	2 31.31	17 30 11.8	9 2.3	9.906 0918	12 7719	10 51.0
	15	8 22 6.61	3 0.34	17 39 14.1	7 7.0	9.918 8637	12 8235	10 49.8
	16	8 25 6.95	3 28.78	17 46 21.1	5 1.2	9.931 6872	12 8033	10 49.1
	17	8 28 35.73	3 56.41	+17 51 22.3	2 45.3	9.944 4905	12 7142	10 48.9
	18	8 32 32.14	4 23.03	17 54 7.6	0 20.2	9.957 2047	12 5588	10 49.1
	19	8 36 55.17	4 48.42	17 54 27.8	2 13.2	9.969 7635	12 3405	10 49.7
	20	8 41 43.59	5 12.38	17 52 14.6	4 53.9	9.982 1040	12 0630	10 50.7
	21	8 46 55.97	5 34.74	17 47 20.7	7 40.7	9.994 1670	11 7307	10 52.2
	22	8 52 30.71	5 55.30	17 39 40.0	10 31.9	0.005 8977	11 3481	10 54.0
	23	8 58 26.01	6 13.94	+17 29 8.1	13 25.7	0.017 2458	10 9207	10 56.1
	24	9 4 39.95	6 30.54	17 15 42.4	16 20.6	0.028 1665	10 4543	10 58.5
	25	9 11 10.49	6 45.01	16 59 21.8	19 14.3	0.038 6208	9 9554	11 1.2
	26	9 17 55.50	6 57.31	16 40 7.5	22 5.0	0.048 5762	9 4311	11 4.1
	27	9 24 52.81	7 7.45	16 18 2.5	24 50.8	0.058 0073	8 8881	11 7.2
	28	9 32 0.26	7 15.51	15 53 11.7	27 29.8	0.066 8954	8 3341	11 10.5
	29	9 39 15.77	7 21.56	+15 25 41.9	30 0.7	0.075 2295	7 7758	11 13.9
	30	9 46 37.33	7 25.73	14 55 41.2	32 22.1	0.083 0053	7 2191	11 17.3
	31	9 54 3.06	7 28.20	14 23 19.1	34 33.1	0.090 2244	6 6702	11 20.8
Sept.	1	10 1 31.26	7 29.12	13 48 46.0	36 33.1	0.096 8946	6 1338	11 24.4
	2	10 9 0.38	7 28.71	13 12 12.9	38 21.7	0.103 0284	5 6139	11 27.9
	3	10 16 29.09		+12 33 51.2		0.108 6423		11 31.5

Tag		0h Welt-Zeit						Obere Kulmination in Greenwich
		Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933		h m s	m s	° ′ ″	′ ″			h m
Sept.	3	10 16 29.09	7 27.16	+12 33 51.2	39 59.1	0.108 6423	5 1136	11 31.5
	4	10 23 56.25	7 24.65	11 53 52.1	41 25.1	0.113 7559	4 6350	11 35.0
	5	10 31 20.90	7 21.34	11 12 27.0	42 40.4	0.118 3909	4 1797	11 38.4
	6	10 38 42.24	7 17.43	10 29 46.6	43 45.4	0.122 5706	3 7480	11 41.8
	7	10 45 59.67	7 13.06	9 46 1.2	44 40.8	0.126 3186	3 3400	11 45.1
	8	10 53 12.73	7 8.34	9 1 20.4	45 27.0	0.129 6586	2 9555	11 48.4
	9	11 0 21.07	7 3.38	+ 8 15 53.4	46 4.9	0.132 6141	2 5938	11 51.5
	10	11 7 24.45	6 58.30	7 29 48.5	46 35.3	0.135 2079	2 2537	11 54.6
	11	11 14 22.75	6 53.16	6 43 13.2	46 58.5	0.137 4616	1 9341	11 57.6
	12	11 21 15.91	6 48.02	5 56 14.7	47 15.3	0.139 3957	1 6336	12 0.5
	13	11 28 3.93	6 42.96	5 8 59.4	47 26.6	0.141 0293	1 3508	12 3.3
	14	11 34 46.89	6 38.00	4 21 32.8	47 32.7	0.142 3801	1 0842	12 6.1
	15	11 41 24.89	6 33.17	+ 3 34 0.1	47 34.1	0.143 4643	8327	12 8.7
	16	11 47 58.06	6 28.50	2 46 26.0	47 31.1	0.144 2970	5945	12 11.3
	17	11 54 26.56	6 24.01	1 58 54.9	47 24.5	0.144 8915	3688	12 13.8
	18	12 0 50.57	6 19.71	1 11 30.4	47 14.4	0.145 2603	1539	12 16.2
	19	12 7 10.28	6 15.60	+ 0 24 16.0	47 1.0	0.145 4142	513	12 18.6
	20	12 13 25.88	6 11.71	− 0 22 45.0	46 45.1	0.145 3629	2478	12 20.9
	21	12 19 37.59	6 8.00	− 1 9 30.1	46 26.5	0.145 1151	4365	12 23.1
	22	12 25 45.59	6 4.50	1 55 56.6	46 5.3	0.144 6786	6185	12 25.3
	23	12 31 50.09	6 1.20	2 42 1.9	45 42.3	0.144 0601	7949	12 27.4
	24	12 37 51.29	5 58.09	3 27 44.2	45 17.2	0.143 2652	9663	12 29.4
	25	12 43 49.38	5 55.15	4 13 1.4	44 50.1	0.142 2989	1 1333	12 31.4
	26	12 49 44.53	5 52.41	4 57 51.5	44 21.5	0.141 1656	1 2971	12 33.4
	27	12 55 36.94	5 49.84	− 5 42 13.0	43 51.3	0.139 8685	1 4583	12 35.3
	28	13 1 26.78	5 47.42	6 26 4.3	43 19.6	0.138 4102	1 6173	12 37.2
	29	13 7 14.20	5 45.15	7 9 23.9	42 46.2	0.136 7929	1 7748	12 39.0
	30	13 12 59.35	5 43.03	7 52 10.1	42 11.7	0.135 0181	1 9318	12 40.8
Okt.	1	13 18 42.38	5 41.04	8 34 21.8	41 36.0	0.133 0863	2 0884	12 42.5
	2	13 24 23.42	5 39.15	9 15 57.8	40 58.8	0.130 9979	2 2454	12 44.3
	3	13 30 2.57	5 37.38	− 9 56 56.6	40 20.2	0.128 7525	2 4033	12 46.0
	4	13 35 39.95	5 35.70	10 37 16.8	39 40.5	0.126 3492	2 5627	12 47.6
	5	13 41 15.65	5 34.10	11 16 57.3	38 59.5	0.123 7865	2 7242	12 49.3
	6	13 46 49.75	5 32.56	11 55 56.8	38 17.3	0.121 0623	2 8880	12 50.9
	7	13 52 22.31	5 31.05	12 34 14.1	37 33.7	0.118 1743	3 0548	12 52.5
	8	13 57 53.36	5 29.56	13 11 47.8	36 48.8	0.115 1195	3 2253	12 54.0
	9	14 3 22.92	5 28.07	−13 48 36.6	36 2.7	0.111 8942	3 3998	12 55.6
	10	14 8 50.99	5 26.57	14 24 39.3	35 14.9	0.108 4944	3 5787	12 57.1
	11	14 14 17.56	5 25.02	14 59 54.2	34 25.8	0.104 9157	3 7626	12 58.6
	12	14 19 42.58	5 23.41	15 34 20.0	33 35.3	0.101 1531	3 9520	13 0.0
	13	14 25 5.99	5 21.68	16 7 55.3	32 43.1	0.097 2011	4 1474	13 1.5
	14	14 30 27.67		−16 40 38.4		0.093 0537		13 2.9

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Okt. 14	14 30 27.67	5 19.82	−16 40 38.4	31 49.2	0.093 0537	4 3492	13 2.9
15	14 35 47.49	5 17.79	17 12 27.6	30 53.7	0.088 7045	4 5579	13 4.2
16	14 41 5.28	5 15.55	17 43 21.3	29 56.2	0.084 1466	4 7741	13 5.6
17	14 46 20.83	5 13.06	18 13 17.5	28 56.9	0.079 3725	4 9983	13 6.9
18	14 51 33.89	5 10.25	18 42 14.4	27 55.6	0.074 3742	5 2308	13 8.1
19	14 56 44.14	5 7.09	19 10 10.0	26 52.0	0.069 1434	5 4719	13 9.3
20	15 1 51.23	5 3.50	−19 37 2.0	25 46.0	0.063 6715	5 7221	13 10.5
21	15 6 54.73	4 59.41	20 2 48.0	24 37.8	0.057 9494	5 9817	13 11.6
22	15 11 54.14	4 54.76	20 27 25.8	23 26.9	0.051 9677	6 2509	13 12.6
23	15 16 48.90	4 49.44	20 50 52.7	22 13.0	0.045 7168	6 5297	13 13.5
24	15 21 38.34	4 43.38	21 13 5.7	20 56.2	0.039 1871	6 8178	13 14.3
25	15 26 21.72	4 36.44	21 34 1.9	19 36.1	0.032 3693	7 1153	13 15.0
26	15 30 58.16	4 28.53	−21 53 38.0	18 12.5	0.025 2540	7 4214	13 15.6
27	15 35 26.69	4 19.50	22 11 50.5	16 45.0	0.017 8326	7 7351	13 16.1
28	15 39 46.19	4 9.20	22 28 35.5	15 13.3	0.010 0975	8 0554	13 16.4
29	15 43 55.39	3 57.50	22 43 48.8	13 37.1	0.002 0421	8 3800	13 16.5
30	15 47 52.89	3 44.20	22 57 25.9	11 55.6	9.993 6621	8 7060	13 16.4
31	15 51 37.09	3 29.11	23 9 21.5	10 8.6	9.984 9561	9 0300	13 16.0
Nov. 1	15 55 6.20	3 12.03	−23 19 30.1	8 15.3	9.975 9261	9 3473	13 15.4
2	15 58 18.23	2 52.77	23 27 45.4	6 15.1	9.966 5788	9 6512	13 14.5
3	16 1 11.00	2 31.13	23 34 0.5	4 7.0	9.956 9276	9 9336	13 13.2
4	16 3 42.13	2 6.91	23 38 7.5	1 50.3	9.946 9940	10 1842	13 11.6
5	16 5 49.04	1 39.95	23 39 57.8	0 35.9	9.936 8098	10 3898	13 9.6
6	16 7 28.99	1 10.14	23 39 21.9	3 12.5	9.926 4200	10 5349	13 7.0
7	16 8 39.13	0 37.48	−23 36 9.4	6 0.5	9.915 8851	10 5996	13 3.9
8	16 9 16.61	0 2.05	23 30 8.9	9 0.4	9.905 2855	10 5620	13 0.3
9	16 9 18.66	0 35.85	23 21 8.5	12 12.1	9.894 7235	10 3962	12 56.1
10	16 8 42.81	1 15.71	23 8 56.4	15 35.1	9.884 3273	10 0744	12 51.2
11	16 7 27.10	1 56.77	22 53 21.3	19 7.3	9.874 2529	9 5676	12 45.6
12	16 5 30.33	2 37.95	22 34 14.0	22 45.3	9.864 6853	8 8485	12 39.4
13	16 2 52.38	3 17.80	−22 11 28.7	26 23.3	9.855 8368	7 8954	12 32.5
14	15 59 34.58	3 54.61	21 45 5.4	29 53.1	9.847 9414	6 6959	12 25.0
15	15 55 39.97	4 26.50	21 15 12.3	33 4.3	9.841 2455	5 2518	12 16.9
16	15 51 13.47	4 51.52	20 42 8.0	35 44.3	9.835 9937	3 5837	12 8.4
17	15 46 21.95	5 7.99	20 6 23.7	37 40.3	9.832 4100	1 7330	11 59.5
18	15 41 13.96	5 14.60	19 28 43.4	38 40.3	9.830 6770	2389	11 50.4
19	15 35 59.36	5 10.71	−18 50 3.1	38 35.6	9.830 9159	2 2555	11 41.3
20	15 30 48.65	4 56.51	18 11 27.5	37 22.1	9.833 1714	4 2331	11 32.3
21	15 25 52.14	4 32.83	17 34 5.4	35 1.7	9.837 4045	6 0905	11 23.6
22	15 21 19.31	4 1.17	16 59 3.7	31 41.9	9.843 4950	7 7591	11 15.4
23	15 17 18.14	3 23.43	16 27 21.8	27 34.1	9.851 2541	9 1889	11 7.8
24	15 13 54.71		−15 59 47.7		9.860 4430		11 0.8

Tag	Scheinbare Rektaszension (0h Welt-Zeit)		Scheinbare Deklination (0h Welt-Zeit)		log Δ (0h Welt-Zeit)		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Nov. 24	15 13 54.71	2 41.60	−15 59 47.7	22 52.6	9.860 4430	10 3524	11 0.8
25	15 11 13.11	1 57.65	15 36 55.1	17 52.5	9.870 7954	11 2427	10 54.5
26	15 9 15.46	1 13.27	15 19 2.6	12 47.1	9.882 0381	11 8709	10 48.9
27	15 8 2.19	0 29.82	15 6 15.5	7 48.0	9.893 9090	12 2603	10 44.1
28	15 7 32.37	0 11.72	14 58 27.5	3 4.1	9.906 1693	12 4414	10 40.0
29	15 7 44.09	0 50.64	14 55 23.4	1 18.5	9.918 6107	12 4487	10 36.6
30	15 8 34.73	1 26.57	−14 56 41.9	5 16.0	9.931 0594	12 3155	10 33.8
Dez. 1	15 10 1.30	1 59.37	15 1 57.9	8 46.7	9.943 3749	12 0724	10 31.5
2	15 12 0.67	2 29.03	15 10 44.6	11 50.4	9.955 4473	11 7472	10 29.8
3	15 14 29.70	2 55.66	15 22 35.0	14 27.6	9.967 1945	11 3632	10 28.5
4	15 17 25.36	3 19.47	15 37 2.6	16 40.0	9.978 5577	10 9393	10 27.7
5	15 20 44.83	3 40.68	15 53 42.6	18 29.5	9.989 4970	10 4911	10 27.2
6	15 24 25.51	3 59.54	−16 12 12.1	19 58.0	9.999 9881	10 0301	10 27.1
7	15 28 25.05	4 16.32	16 32 10.1	21 7.5	0.010 0182	9 5659	10 27.3
8	15 32 41.37	4 31.23	16 53 17.6	22 0.2	0.019 5841	9 1052	10 27.7
9	15 37 12.60	4 44.51	17 15 17.8	22 37.9	0.028 6893	8 6531	10 28.4
10	15 41 57.11	4 56.35	17 37 55.7	23 2.3	0.037 3424	8 2129	10 29.3
11	15 46 53.46	5 6.95	18 0 58.0	23 15.0	0.045 5553	7 7869	10 30.4
12	15 52 0.41	5 16.45	−18 24 13.0	23 17.2	0.053 3422	7 3767	10 31.6
13	15 57 16.86	5 24.99	18 47 30.2	23 10.4	0.060 7189	6 9830	10 33.0
14	16 2 41.85	5 32.73	19 10 40.6	22 55.6	0.067 7019	6 6061	10 34.5
15	16 8 14.58	5 39.73	19 33 36.2	22 33.7	0.074 3080	6 2457	10 36.2
16	16 13 54.31	5 46.11	19 56 9.9	22 5.7	0.080 5537	5 9016	10 38.0
17	16 19 40.42	5 51.96	20 18 15.6	21 31.9	0.086 4553	5 5734	10 39.9
18	16 25 32.38	5 57.32	−20 39 47.5	20 53.4	0.092 0287	5 2604	10 41.8
19	16 31 29.70	6 2.26	21 0 40.9	20 10.3	0.097 2891	4 9617	10 43.9
20	16 37 31.96	6 6.84	21 20 51.2	19 23.5	0.102 2508	4 6764	10 46.0
21	16 43 38.80	6 11.11	21 40 14.7	18 33.0	0.106 9272	4 4040	10 48.2
22	16 49 49.91	6 15.08	21 58 47.7	17 39.5	0.111 3312	4 1437	10 50.5
23	16 56 4.99	6 18.82	22 16 27.2	16 42.9	0.115 4749	3 8943	10 52.8
24	17 2 23.81	6 22.33	−22 33 10.1	15 43.9	0.119 3692	3 6553	10 55.2
25	17 8 46.14	6 25.63	22 48 54.0	14 42.3	0.123 0245	3 4258	10 57.7
26	17 15 11.77	6 28.75	23 3 36.3	13 38.5	0.126 4503	3 2049	11 0.2
27	17 21 40.52	6 31.70	23 17 14.8	12 32.7	0.129 6552	2 9920	11 2.8
28	17 28 12.22	6 34.50	23 29 47.5	11 25.0	0.132 6472	2 7864	11 5.4
29	17 34 46.72	6 37.16	23 41 12.5	10 15.4	0.135 4336	2 5876	11 8.0
30	17 41 23.88	6 39.67	−23 51 27.9	9 4.1	0.138 0212	2 3946	11 10.7
31	17 48 3.55	6 42.06	24 0 32.0	7 51.4	0.140 4158	2 2069	11 13.5
32	17 54 45.61		−24 8 23.4		0.142 6227		11 16.3

Tag		0ʰ Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933		h m s	m s	° ′ ″	′ ″			h m
Jan.	0	16 42 47.17	5 16.57	−21 6 27.1	11 49.2	0.159 0723	1 3994	10 6.5
	1	16 48 3.74	5 17.47	21 18 16.3	11 12.5	0.160 4717	1 3841	10 7.9
	2	16 53 21.21	5 18.32	21 29 28.8	10 35.2	0.161 8558	1 3691	10 9.2
	3	16 58 39.53	5 19.14	21 40 4.0	9 57.5	0.163 2249	1 3543	10 10.6
	4	17 3 58.67	5 19.92	21 50 1.5	9 19.2	0.164 5792	1 3396	10 12.0
	5	17 9 18.59	5 20.65	21 59 20.7	8 40.4	0.165 9188	1 3251	10 13.4
	6	17 14 39.24	5 21.34	−22 8 1.1	8 1.3	0.167 2439	1 3108	10 14.8
	7	17 20 0.58	5 21.99	22 16 2.4	7 21.8	0.168 5547	1 2966	10 16.2
	8	17 25 22.57	5 22.59	22 23 24.2	6 41.8	0.169 8513	1 2825	10 17.6
	9	17 30 45.16	5 23.14	22 30 6.0	6 1.6	0.171 1338	1 2686	10 19.1
	10	17 36 8.30	5 23.64	22 36 7.6	5 21.0	0.172 4024	1 2548	10 20.5
	11	17 41 31.94	5 24.09	22 41 28.6	4 40.1	0.173 6572	1 2412	10 22.0
	12	17 46 56.03	5 24.48	−22 46 8.7	3 59.0	0.174 8984	1 2274	10 23.4
	13	17 52 20.51	5 24.82	22 50 7.7	3 17.6	0.176 1258	1 2140	10 24.9
	14	17 57 45.33	5 25.11	22 53 25.3	2 36.0	0.177 3398	1 2005	10 26.4
	15	18 3 10.44	5 25.33	22 56 1.3	1 54.3	0.178 5403	1 1871	10 27.8
	16	18 8 35.77	5 25.52	22 57 55.6	1 12.3	0.179 7274	1 1736	10 29.3
	17	18 14 1.29	5 25.62	22 59 7.9	0 30.3	0.180 9010	1 1602	10 30.8
	18	18 19 26.91	5 25.69	−22 59 38.2	0 11.8	0.182 0612	1 1468	10 32.3
	19	18 24 52.60	5 25.67	22 59 26.4	0 54.0	0.183 2080	1 1334	10 33.8
	20	18 30 18.27	5 25.61	22 58 32.4	1 36.0	0.184 3414	1 1199	10 35.3
	21	18 35 43.88	5 25.48	22 56 56.4	2 18.3	0.185 4613	1 1065	10 36.8
	22	18 41 9.36	5 25.30	22 54 38.1	3 0.3	0.186 5678	1 0933	10 38.2
	23	18 46 34.66	5 25.05	22 51 37.8	3 42.3	0.187 6611	1 0801	10 39.7
	24	18 51 59.71	5 24.74	−22 47 55.5	4 24.2	0.188 7412	1 0667	10 41.2
	25	18 57 24.45	5 24.37	22 43 31.3	5 5.8	0.189 8079	1 0537	10 42.7
	26	19 2 48.82	5 23.94	22 38 25.5	5 47.3	0.190 8616	1 0407	10 44.1
	27	19 8 12.76	5 23.45	22 32 38.2	6 28.5	0.191 9023	1 0278	10 45.6
	28	19 13 36.21	5 22.92	22 26 9.7	7 9.6	0.192 9301	1 0150	10 47.0
	29	19 18 59.13	5 22.33	22 19 0.1	7 50.3	0.193 9451	1 0025	10 48.5
	30	19 24 21.46	5 21.68	−22 11 9.8	8 30.6	0.194 9476	9899	10 49.9
	31	19 29 43.14	5 20.98	22 2 39.2	9 10.6	0.195 9375	9777	10 51.3
Febr.	1	19 35 4.12	5 20.25	21 53 28.6	9 50.3	0.196 9152	9656	10 52.7
	2	19 40 24.37	5 19.48	21 43 38.3	10 29.6	0.197 8808	9535	10 54.1
	3	19 45 43.85	5 18.65	21 33 8.7	11 8.3	0.198 8343	9415	10 55.5
	4	19 51 2.50	5 17.80	21 22 0.4	11 46.8	0.199 7758	9297	10 56.8
	5	19 56 20.30	5 16.90	−21 10 13.6	12 24.7	0.200 7055	9181	10 58.2
	6	20 1 37.20	5 15.97	20 57 48.9	13 2.1	0.201 6236	9063	10 59.5
	7	20 6 53.17	5 15.02	20 44 46.8	13 39.1	0.202 5299	8949	11 0.9
	8	20 12 8.19	5 14.03	20 31 7.7	14 15.6	0.203 4248	8834	11 2.2
	9	20 17 22.22	5 13.01	20 16 52.1	14 51.3	0.204 3082	8720	11 3.4
	10	20 22 35.23		−20 2 0.8		0.205 1802		11 4.7

Tag		0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933		h m s	m s	° ′ ″	′ ″			h m
Febr.	10	20 22 35.23	5 11.98	−20 2 0.8	15 26.7	0.205 1802	8607	11 4.7
	11	20 27 47.21	5 10.91	19 46 34.1	16 1.6	0.206 0409	8494	11 5.9
	12	20 32 58.12	5 9.85	19 30 32.5	16 35.7	0.206 8903	8381	11 7.2
	13	20 38 7.97	5 8.75	19 13 56.8	17 9.2	0.207 7284	8268	11 8.4
	14	20 43 16.72	5 7.65	18 56 47.6	17 42.2	0.208 5552	8154	11 9.6
	15	20 48 24.37	5 6.52	18 39 5.4	18 14.5	0.209 3706	8041	11 10.8
	16	20 53 30.89	5 5.40	−18 20 50.9	18 46.2	0.210 1747	7925	11 11.9
	17	20 58 36.29	5 4.26	18 2 4.7	19 17.2	0.210 9672	7811	11 13.1
	18	21 3 40.55	5 3.11	17 42 47.5	19 47.5	0.211 7483	7695	11 14.2
	19	21 8 43.66	5 1.97	17 23 0.0	20 17.2	0.212 5178	7579	11 15.3
	20	21 13 45.63	5 0.81	17 2 42.8	20 46.1	0.213 2757	7464	11 16.4
	21	21 18 46.44	4 59.67	16 41 56.7	21 14.4	0.214 0221	7349	11 17.4
	22	21 23 46.11	4 58.51	−16 20 42.3	21 41.8	0.214 7570	7231	11 18.5
	23	21 28 44.62	4 57.37	15 59 0.5	22 8.5	0.215 4801	7115	11 19.5
	24	21 33 41.99	4 56.22	15 36 52.0	22 34.6	0.216 1916	6999	11 20.5
	25	21 38 38.21	4 55.08	15 14 17.4	22 59.9	0.216 8915	6883	11 21.5
	26	21 43 33.29	4 53.96	14 51 17.5	23 24.4	0.217 5798	6769	11 22.5
	27	21 48 27.25	4 52.86	14 27 53.1	23 48.2	0.218 2567	6654	11 23.4
	28	21 53 20.11	4 51.75	−14 4 4.9	24 11.3	0.218 9221	6541	11 24.3
März	1	21 58 11.86	4 50.67	13 39 53.6	24 33.5	0.219 5762	6428	11 25.2
	2	22 3 2.53	4 49.61	13 15 20.1	24 55.1	0.220 2190	6315	11 26.1
	3	22 7 52.14	4 48.55	12 50 25.0	25 15.9	0.220 8505	6202	11 27.0
	4	22 12 40.69	4 47.55	12 25 9.1	25 35.9	0.221 4707	6092	11 27.9
	5	22 17 28.24	4 46.54	11 59 33.2	25 55.2	0.222 0799	5981	11 28.7
	6	22 22 14.78	4 45.56	−11 33 38.0	26 13.8	0.222 6780	5871	11 29.5
	7	22 27 0.34	4 44.62	11 7 24.2	26 31.6	0.223 2651	5761	11 30.4
	8	22 31 44.96	4 43.71	10 40 52.6	26 48.6	0.223 8412	5651	11 31.2
	9	22 36 28.67	4 42.83	10 14 4.0	27 5.1	0.224 4063	5543	11 31.9
	10	22 41 11.50	4 41.97	9 46 58.9	27 20.8	0.224 9606	5435	11 32.7
	11	22 45 53.47	4 41.16	9 19 38.1	27 35.6	0.225 5041	5326	11 33.5
	12	22 50 34.63	4 40.37	− 8 52 2.5	27 49.8	0.226 0367	5216	11 34.2
	13	22 55 15.00	4 39.62	8 24 12.7	28 3.3	0.226 5583	5108	11 34.9
	14	22 59 54.62	4 38.91	7 56 9.4	28 16.1	0.227 0691	4998	11 35.6
	15	23 4 33.53	4 38.24	7 27 53.3	28 28.1	0.227 5689	4888	11 36.3
	16	23 9 11.77	4 37.59	6 59 25.2	28 39.4	0.228 0577	4776	11 37.0
	17	23 13 49.36	4 36.98	6 30 45.8	28 50.0	0.228 5353	4664	11 37.7
	18	23 18 26.34	4 36.42	− 6 1 55.8	28 59.8	0.229 0017	4550	11 38.4
	19	23 23 2.76	4 35.90	5 32 56.0	29 9.0	0.229 4567	4436	11 39.0
	20	23 27 38.66	4 35.41	5 3 47.0	29 17.4	0.229 9003	4321	11 39.7
	21	23 32 14.07	4 34.95	4 34 29.6	29 25.0	0.230 3324	4203	11 40.3
	22	23 36 49.02	4 34.54	4 5 4.6	29 31.8	0.230 7527	4086	11 41.0
	23	23 41 23.56		− 3 35 32.8		0.231 1613		11 41.6

Tag	0h Welt-Zeit: Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
März 23	23 41 23.56	4 34.17	−3 35 32.8	29 38.1	0.231 1613	3968	11 41.6
24	23 45 57.73	4 33.83	3 5 54.7	29 43.5	0.231 5581	3849	11 42.2
25	23 50 31.56	4 33.53	2 36 11.2	29 48.2	0.231 9430	3731	11 42.8
26	23 55 5.09	4 33.26	2 6 23.0	29 52.1	0.232 3161	3612	11 43.4
27	23 59 38.35	4 33.05	1 36 30.9	29 55.3	0.232 6773	3491	11 44.0
28	0 4 11.40	4 32.86	1 6 35.6	29 57.9	0.233 0264	3370	11 44.6
29	0 8 44.26	4 32.73	−0 36 37.7	29 59.6	0.233 3634	3252	11 45.3
30	0 13 16.99	4 32.62	−0 6 38.1	30 0.6	0.233 6886	3132	11 45.9
31	0 17 49.61	4 32.57	+0 23 22.5	30 1.0	0.234 0018	3012	11 46.5
April 1	0 22 22.18	4 32.54	0 53 23.5	30 0.4	0.234 3030	2892	11 47.1
2	0 26 54.72	4 32.57	1 23 23.9	29 59.4	0.234 5922	2772	11 47.7
3	0 31 27.29	4 32.63	1 53 23.3	29 57.6	0.234 8694	2653	11 48.3
4	0 35 59.92	4 32.73	+2 23 20.9	29 55.1	0.235 1347	2533	11 48.9
5	0 40 32.65	4 32.88	2 53 16.0	29 51.7	0.235 3880	2414	11 49.5
6	0 45 5.53	4 33.07	3 23 7.7	29 47.7	0.235 6294	2294	11 50.1
7	0 49 38.60	4 33.31	3 52 55.4	29 43.1	0.235 8588	2174	11 50.7
8	0 54 11.91	4 33.58	4 22 38.5	29 37.7	0.236 0762	2056	11 51.3
9	0 58 45.49	4 33.89	4 52 16.2	29 31.6	0.236 2818	1936	11 51.9
10	1 3 19.38	4 34.24	+5 21 47.8	29 24.8	0.236 4754	1817	11 52.6
11	1 7 53.62	4 34.66	5 51 12.6	29 17.3	0.236 6571	1696	11 53.2
12	1 12 28.28	4 35.08	6 20 29.9	29 9.1	0.236 8267	1574	11 53.8
13	1 17 3.36	4 35.58	6 49 39.0	29 0.2	0.236 9841	1451	11 54.5
14	1 21 38.94	4 36.10	7 18 39.2	28 50.6	0.237 1292	1328	11 55.1
15	1 26 15.04	4 36.67	7 47 29.8	28 40.1	0.237 2620	1203	11 55.8
16	1 30 51.71	4 37.26	+8 16 9.9	28 29.1	0.237 3823	1076	11 56.5
17	1 35 28.97	4 37.89	8 44 39.0	28 17.2	0.237 4899	950	11 57.1
18	1 40 6.86	4 38.57	9 12 56.2	28 4.7	0.237 5849	820	11 57.8
19	1 44 45.43	4 39.28	9 41 0.9	27 51.4	0.237 6669	689	11 58.5
20	1 49 24.71	4 40.01	10 8 52.3	27 37.4	0.237 7358	559	11 59.3
21	1 54 4.72	4 40.79	10 36 29.7	27 22.4	0.237 7917	425	12 0.0
22	1 58 45.51	4 41.60	+11 3 52.1	27 7.0	0.237 8342	291	12 0.7
23	2 3 27.11	4 42.42	11 30 59.1	26 50.6	0.237 8633	156	12 1.5
24	2 8 9.53	4 43.28	11 57 49.7	26 33.6	0.237 8789	22 (underlined)	12 2.3
25	2 12 52.81	4 44.18	12 24 23.3	26 15.8	0.237 8811	115	12 3.1
26	2 17 36.99	4 45.08	12 50 39.1	25 57.1	0.237 8696	252	12 3.9
27	2 22 22.07	4 46.02	13 16 36.2	25 37.9	0.237 8444	389	12 4.7
28	2 27 8.09	4 46.97	+13 42 14.1	25 17.7	0.237 8055	526	12 5.5
29	2 31 55.06	4 47.97	14 7 31.8	24 56.9	0.237 7529	664	12 6.4
30	2 36 43.03	4 48.96	14 32 28.7	24 35.3	0.237 6865	803	12 7.2
Mai 1	2 41 31.99	4 49.98	14 57 4.0	24 13.0	0.237 6062	941	12 8.1
2	2 46 21.97	4 51.02	15 21 17.0	23 49.9	0.237 5121	1079	12 9.0
3	2 51 12.99		+15 45 6.9		0.237 4042		12 9.9

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Mai 3	2 51 12.99	4 52.08	+15 45 6.9	23 26.1	0.237 4042	1219	12 9.9
4	2 56 5.07	4 53.14	16 8 33.0	23 1.6	0.237 2823	1357	12 10.9
5	3 0 58.21	4 54.23	16 31 34.6	22 36.3	0.237 1466	1495	12 11.8
6	3 5 52.44	4 55.31	16 54 10.9	22 10.4	0.236 9971	1633	12 12.8
7	3 10 47.75	4 56.42	17 16 21.3	21 43.6	0.236 8338	1772	12 13.8
8	3 15 44.17	4 57.52	17 38 4.9	21 16.3	0.236 6566	1911	12 14.8
9	3 20 41.69	4 58.65	+17 59 21.2	20 48.1	0.236 4655	2050	12 15.8
10	3 25 40.34	4 59.77	18 20 9.3	20 19.3	0.236 2605	2190	12 16.8
11	3 30 40.11	5 0.90	18 40 28.6	19 49.8	0.236 0415	2329	12 17.9
12	3 35 41.01	5 2.03	19 0 18.4	19 19.6	0.235 8086	2471	12 19.0
13	3 40 43.04	5 3.16	19 19 38.0	18 48.7	0.235 5615	2612	12 20.1
14	3 45 46.20	5 4.28	19 38 26.7	18 17.2	0.235 3003	2756	12 21.2
15	3 50 50.48	5 5.38	+19 56 43.9	17 44.9	0.235 0247	2902	12 22.4
16	3 55 55.86	5 6.49	20 14 28.8	17 11.9	0.234 7345	3048	12 23.5
17	4 1 2.35	5 7.57	20 31 40.7	16 38.5	0.234 4297	3195	12 24.7
18	4 6 9.92	5 8.63	20 48 19.2	16 4.2	0.234 1102	3345	12 25.9
19	4 11 18.55	5 9.70	21 4 23.4	15 29.4	0.233 7757	3494	12 27.1
20	4 16 28.25	5 10.72	21 19 52.8	14 53.9	0.233 4263	3646	12 28.3
21	4 21 38.97	5 11.71	+21 34 46.7	14 17.8	0.233 0617	3798	12 29.6
22	4 26 50.68	5 12.68	21 49 4.5	13 41.2	0.232 6819	3952	12 30.8
23	4 32 3.36	5 13.63	22 2 45.7	13 4.0	0.232 2867	4107	12 32.1
24	4 37 16.99	5 14.52	22 15 49.7	12 26.3	0.231 8760	4262	12 33.4
25	4 42 31.51	5 15.39	22 28 16.0	11 47.9	0.231 4498	4418	12 34.7
26	4 47 46.90	5 16.22	22 40 3.9	11 9.2	0.231 0080	4573	12 36.0
27	4 53 3.12	5 17.00	+22 51 13.1	10 30.0	0.230 5507	4731	12 37.4
28	4 58 20.12	5 17.74	23 1 43.1	9 50.3	0.230 0776	4888	12 38.7
29	5 3 37.86	5 18.44	23 11 33.4	9 10.2	0.229 5888	5045	12 40.1
30	5 8 56.30	5 19.09	23 20 43.6	8 29.6	0.229 0843	5203	12 41.4
31	5 14 15.39	5 19.67	23 29 13.2	7 48.7	0.228 5640	5361	12 42.8
Juni 1	5 19 35.06	5 20.22	23 37 1.9	7 7.5	0.228 0279	5519	12 44.2
2	5 24 55.28	5 20.71	+23 44 9.4	6 26.0	0.227 4760	5677	12 45.6
3	5 30 15.99	5 21.16	23 50 35.4	5 44.1	0.226 9083	5833	12 47.0
4	5 35 37.15	5 21.53	23 56 19.5	5 2.0	0.226 3250	5990	12 48.5
5	5 40 58.68	5 21.86	24 1 21.5	4 19.8	0.225 7260	6148	12 49.9
6	5 46 20.54	5 22.13	24 5 41.3	3 37.3	0.225 1112	6304	12 51.3
7	5 51 42.67	5 22.35	24 9 18.6	2 54.5	0.224 4808	6461	12 52.7
8	5 57 5.02	5 22.50	+24 12 13.1	2 11.8	0.223 8347	6617	12 54.2
9	6 2 27.52	5 22.60	24 14 24.9	1 28.8	0.223 1730	6774	12 55.6
10	6 7 50.12	5 22.64	24 15 53.7	0 45.8	0.222 4956	6931	12 57.0
11	6 13 12.76	5 22.63	24 16 39.5	0 2.6	0.221 8025	7090	12 58.5
12	6 18 35.39	5 22.55	24 16 42.1	0 40.4	0.221 0935	7249	12 59.9
13	6 23 57.94		+24 16 1.7		0.220 3686		13 1.3

Tag	0ʰ Welt-Zeit: Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Juni 13	6 23 57.94	5 22.42	+24 16 1.7	1 23.6	0.220 3686	7409	13 1.3
14	6 29 20.36	5 22.23	24 14 38.1	2 6.5	0.219 6277	7571	13 2.8
15	6 34 42.59	5 21.97	24 12 31.6	2 49.5	0.218 8706	7733	13 4.2
16	6 40 4.56	5 21.67	24 9 42.1	3 32.5	0.218 0973	7897	13 5.6
17	6 45 26.23	5 21.28	24 6 9.6	4 15.1	0.217 3076	8062	13 7.0
18	6 50 47.51	5 20.85	24 1 54.5	4 57.8	0.216 5014	8228	13 8.4
19	6 56 8.36	5 20.35	+23 56 56.7	5 40.1	0.215 6786	8394	13 9.8
20	7 1 28.71	5 19.81	23 51 16.6	6 22.3	0.214 8392	8561	13 11.2
21	7 6 48.52	5 19.20	23 44 54.3	7 4.1	0.213 9831	8728	13 12.6
22	7 12 7.72	5 18.54	23 37 50.2	7 45.7	0.213 1103	8898	13 14.0
23	7 17 26.26	5 17.82	23 30 4.5	8 27.0	0.212 2205	9067	13 15.4
24	7 22 44.08	5 17.05	23 21 37.5	9 7.9	0.211 3138	9237	13 16.7
25	7 28 1.13	5 16.23	+23 12 29.6	9 48.5	0.210 3901	9408	13 18.0
26	7 33 17.36	5 15.37	23 2 41.1	10 28.5	0.209 4493	9579	13 19.4
27	7 38 32.73	5 14.45	22 52 12.6	11 8.2	0.208 4914	9750	13 20.7
28	7 43 47.18	5 13.51	22 41 4.4	11 47.5	0.207 5164	9921	13 21.9
29	7 49 0.69	5 12.50	22 29 16.9	12 26.2	0.206 5243	1 0093	13 23.2
30	7 54 13.19	5 11.47	22 16 50.7	13 4.4	0.205 5150	1 0263	13 24.5
Juli 1	7 59 24.66	5 10.40	+22 3 46.3	13 42.2	0.204 4887	1 0434	13 25.7
2	8 4 35.06	5 9.29	21 50 4.1	14 19.4	0.203 4453	1 0603	13 26.9
3	8 9 44.35	5 8.15	21 35 44.7	14 55.9	0.202 3850	1 0772	13 28.1
4	8 14 52.50	5 7.00	21 20 48.8	15 32.1	0.201 3078	1 0941	13 29.3
5	8 19 59.50	5 5.82	21 5 16.7	16 7.5	0.200 2137	1 1110	13 30.5
6	8 25 5.32	5 4.60	20 49 9.2	16 42.4	0.199 1027	1 1276	13 31.6
7	8 30 9.92	5 3.39	+20 32 26.8	17 16.7	0.197 9751	1 1444	13 32.8
8	8 35 13.31	5 2.15	20 15 10.1	17 50.3	0.196 8307	1 1612	13 33.9
9	8 40 15.46	5 0.91	19 57 19.8	18 23.3	0.195 6695	1 1778	13 34.9
10	8 45 16.37	4 59.65	19 38 56.5	18 55.8	0.194 4917	1 1946	13 36.0
11	8 50 16.02	4 58.38	19 20 0.7	19 27.5	0.193 2971	1 2114	13 37.1
12	8 55 14.40	4 57.12	19 0 33.2	19 58.5	0.192 0857	1 2284	13 38.1
13	9 0 11.52	4 55.85	+18 40 34.7	20 29.1	0.190 8573	1 2454	13 39.1
14	9 5 7.37	4 54.58	18 20 5.6	20 58.8	0.189 6119	1 2625	13 40.0
15	9 10 1.95	4 53.31	17 59 6.8	21 27.9	0.188 3494	1 2796	13 41.0
16	9 14 55.26	4 52.04	17 37 38.9	21 56.2	0.187 0698	1 2969	13 41.9
17	9 19 47.30	4 50.78	17 15 42.7	22 23.9	0.185 7729	1 3144	13 42.8
18	9 24 38.08	4 49.53	16 53 18.8	22 50.8	0.184 4585	1 3318	13 43.7
19	9 29 27.61	4 48.27	+16 30 28.0	23 17.1	0.183 1267	1 3494	13 44.6
20	9 34 15.88	4 47.03	16 7 10.9	23 42.5	0.181 7773	1 3670	13 45.4
21	9 39 2.91	4 45.80	15 43 28.4	24 7.5	0.180 4103	1 3848	13 46.3
22	9 43 48.71	4 44.58	15 19 20.9	24 31.5	0.179 0255	1 4026	13 47.1
23	9 48 33.29	4 43.38	14 54 49.4	24 54.7	0.177 6229	1 4205	13 47.9
24	9 53 16.67		+14 29 54.7		0.176 2024		13 48.7

Tag		0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933		h m s	m s	° ′ ″	′ ″			h m
Juli	24	9 53 16.67	4 42.20	+14 29 54.7	25 17.4	0.176 2024	1 4383	13 48.7
	25	9 57 58.87	4 41.03	14 4 37.3	25 39.2	0.174 7641	1 4563	13 49.4
	26	10 2 39.90	4 39.88	13 38 58.1	26 0.4	0.173 3078	1 4743	13 50.1
	27	10 7 19.78	4 38.74	13 12 57.7	26 20.6	0.171 8335	1 4924	13 50.8
	28	10 11 58.52	4 37.65	12 46 37.1	26 40.3	0.170 3411	1 5103	13 51.5
	29	10 16 36.17	4 36.55	12 19 56.8	26 59.2	0.168 8308	1 5283	13 52.2
	30	10 21 12.72	4 35.50	+11 52 57.6	27 17.2	0.167 3025	1 5463	13 52.9
	31	10 25 48.22	4 34.47	11 25 40.4	27 34.7	0.165 7562	1 5642	13 53.5
Aug.	1	10 30 22.69	4 33.46	10 58 5.7	27 51.3	0.164 1920	1 5821	13 54.1
	2	10 34 56.15	4 32.48	10 30 14.4	28 7.2	0.162 6099	1 5998	13 54.7
	3	10 39 28.63	4 31.54	10 2 7.2	28 22.5	0.161 0101	1 6176	13 55.3
	4	10 44 0.17	4 30.64	9 33 44.7	28 37.1	0.159 3925	1 6354	13 55.9
	5	10 48 30.81	4 29.76	+ 9 5 7.6	28 50.9	0.157 7571	1 6532	13 56.5
	6	10 53 0.57	4 28.92	8 36 16.7	29 4.0	0.156 1039	1 6708	13 57.0
	7	10 57 29.49	4 28.12	8 7 12.7	29 16.5	0.154 4331	1 6884	13 57.5
	8	11 1 57.61	4 27.36	7 37 56.2	29 28.3	0.152 7447	1 7061	13 58.1
	9	11 6 24.97	4 26.63	7 8 27.9	29 39.4	0.151 0386	1 7239	13 58.6
	10	11 10 51.60	4 25.95	6 38 48.5	29 49.6	0.149 3147	1 7417	13 59.1
	11	11 15 17.55	4 25.30	+ 6 8 58.9	29 59.5	0.147 5730	1 7596	13 59.6
	12	11 19 42.85	4 24.70	5 38 59.4	30 8.5	0.145 8134	1 7777	14 0.0
	13	11 24 7.55	4 24.12	5 8 50.9	30 16.8	0.144 0357	1 7959	14 0.5
	14	11 28 31.67	4 23.59	4 38 34.1	30 24.6	0.142 2398	1 8142	14 0.9
	15	11 32 55.26	4 23.10	4 8 9.5	30 31.5	0.140 4256	1 8326	14 1.4
	16	11 37 18.36	4 22.66	3 37 38.0	30 37.7	0.138 5930	1 8513	14 1.8
	17	11 41 41.02	4 22.25	+ 3 7 0.3	30 43.4	0.136 7417	1 8699	14 2.2
	18	11 46 3.27	4 21.87	2 36 16.9	30 48.3	0.134 8718	1 8888	14 2.7
	19	11 50 25.14	4 21.55	2 5 28.6	30 52.4	0.132 9830	1 9078	14 3.1
	20	11 54 46.69	4 21.24	1 34 36.2	30 55.9	0.131 0752	1 9268	14 3.5
	21	11 59 7.93	4 21.00	1 3 40.3	30 58.8	0.129 1484	1 9462	14 3.9
	22	12 3 28.93	4 20.77	0 32 41.5	31 0.8	0.127 2022	1 9656	14 4.3
	23	12 7 49.70	4 20.60	+ 0 1 40.7	31 2.3	0.125 2366	1 9851	14 4.7
	24	12 12 10.30	4 20.46	− 0 29 21.6	31 2.9	0.123 2515	2 0047	14 5.1
	25	12 16 30.76	4 20.36	1 0 24.5	31 2.9	0.121 2468	2 0245	14 5.5
	26	12 20 51.12	4 20.29	1 31 27.4	31 2.1	0.119 2223	2 0442	14 5.9
	27	12 25 11.41	4 20.26	2 2 29.5	31 0.8	0.117 1781	2 0642	14 6.3
	28	12 29 31.67	4 20.27	2 33 30.3	30 58.6	0.115 1139	2 0840	14 6.7
	29	12 33 51.94	4 20.32	− 3 4 28.9	30 55.8	0.113 0299	2 1038	14 7.1
	30	12 38 12.26	4 20.41	3 35 24.7	30 52.3	0.110 9261	2 1237	14 7.5
	31	12 42 32.67	4 20.53	4 6 17.0	30 48.1	0.108 8024	2 1437	14 7.9
Sept.	1	12 46 53.20	4 20.70	4 37 5.1	30 43.2	0.106 6587	2 1636	14 8.3
	2	12 51 13.90	4 20.91	5 7 48.3	30 37.7	0.104 4951	2 1836	14 8.7
	3	12 55 34.81		− 5 38 26.0		0.102 3115		14 9.1

Tag	0h Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	m s	° ′ ″	′ ″			h m
Sept. 3	12 55 34.81	4 21.15	− 5 38 26.0	30 31.4	0.102 3115	2 2035	14 9.1
4	12 59 55.96	4 21.43	6 8 57.4	30 24.6	0.100 1080	2 2234	14 9.5
5	13 4 17.39	4 21.75	6 39 22.0	30 17.0	0.097 8846	2 2433	14 10.0
6	13 8 39.14	4 22.11	7 9 39.0	30 8.9	0.095 6413	2 2635	14 10.4
7	13 13 1.25	4 22.52	7 39 47.9	29 59.9	0.093 3778	2 2838	14 10.8
8	13 17 23.77	4 22.96	8 9 47.8	29 50.3	0.091 0940	2 3043	14 11.2
9	13 21 46.73	4 23.44	− 8 39 38.1	29 40.1	0.088 7897	2 3250	14 11.7
10	13 26 10.17	4 23.95	9 9 18.2	29 29.2	0.086 4647	2 3458	14 12.1
11	13 30 34.12	4 24.51	9 38 47.4	29 17.6	0.084 1189	2 3667	14 12.6
12	13 34 58.63	4 25.09	10 8 5.0	29 5.3	0.081 7522	2 3879	14 13.1
13	13 39 23.72	4 25.71	10 37 10.3	28 52.1	0.079 3643	2 4093	14 13.5
14	13 43 49.43	4 26.36	11 6 2.4	28 38.5	0.076 9550	2 4310	14 14.0
15	13 48 15.79	4 27.05	−11 34 40.9	28 24.1	0.074 5240	2 4529	14 14.5
16	13 52 42.84	4 27.76	12 3 5.0	28 8.9	0.072 0711	2 4751	14 15.1
17	13 57 10.60	4 28.49	12 31 13.9	27 53.1	0.069 5960	2 4976	14 15.6
18	14 1 39.09	4 29.26	12 59 7.0	27 36.6	0.067 0984	2 5204	14 16.1
19	14 6 8.35	4 30.05	13 26 43.6	27 19.2	0.064 5780	2 5434	14 16.7
20	14 10 38.40	4 30.87	13 54 2.8	27 1.2	0.062 0346	2 5667	14 17.3
21	14 15 9.27	4 31.69	−14 21 4.0	26 42.4	0.059 4679	2 5904	14 17.8
22	14 19 40.96	4 32.55	14 47 46.4	26 22.9	0.056 8775	2 6142	14 18.4
23	14 24 13.51	4 33.40	15 14 9.3	26 2.6	0.054 2633	2 6383	14 19.0
24	14 28 46.91	4 34.30	15 40 11.9	25 41.7	0.051 6250	2 6626	14 19.7
25	14 33 21.21	4 35.17	16 5 53.6	25 20.0	0.048 9624	2 6872	14 20.3
26	14 37 56.38	4 36.08	16 31 13.6	24 57.6	0.046 2752	2 7118	14 20.9
27	14 42 32.46	4 36.99	−16 56 11.2	24 34.3	0.043 5634	2 7368	14 21.6
28	14 47 9.45	4 37.91	17 20 45.5	24 10.5	0.040 8266	2 7617	14 22.3
29	14 51 47.36	4 38.83	17 44 56.0	23 46.0	0.038 0649	2 7869	14 23.0
30	14 56 26.19	4 39.76	18 8 42.0	23 20.7	0.035 2780	2 8121	14 23.7
Okt. 1	15 1 5.95	4 40.70	18 32 2.7	22 54.8	0.032 4659	2 8376	14 24.4
2	15 5 46.65	4 41.63	18 54 57.5	22 28.1	0.029 6283	2 8630	14 25.2
3	15 10 28.28	4 42.57	−19 17 25.6	22 0.9	0.026 7653	2 8888	14 25.9
4	15 15 10.85	4 43.51	19 39 26.5	21 32.9	0.023 8765	2 9147	14 26.7
5	15 19 54.36	4 44.45	20 0 59.4	21 4.4	0.020 9618	2 9409	14 27.5
6	15 24 38.81	4 45.37	20 22 3.8	20 35.0	0.018 0209	2 9674	14 28.3
7	15 29 24.18	4 46.29	20 42 38.8	20 5.2	0.015 0535	2 9941	14 29.1
8	15 34 10.47	4 47.20	21 2 44.0	19 34.5	0.012 0594	3 0211	14 30.0
9	15 38 57.67	4 48.09	−21 22 18.5	19 3.5	0.009 0383	3 0485	14 30.8
10	15 43 45.76	4 48.98	21 41 22.0	18 31.6	0.005 9898	3 0762	14 31.7
11	15 48 34.74	4 49.83	21 59 53.6	17 59.2	0.002 9136	3 1044	14 32.6
12	15 53 24.57	4 50.68	22 17 52.8	17 26.2	9.999 8092	3 1330	14 33.5
13	15 58 15.25	4 51.49	22 35 19.0	16 52.5	9.996 6762	3 1619	14 34.4
14	16 3 6.74		−22 52 11.5		9.993 5143		14 35.3

Tag	0h Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	m s	° ′ ″	′ ″			h m
Okt. 14	16 3 6.74	4 52.27	−22 52 11.5	16 18.4	9.993 5143	3 1912	14 35.3
15	16 7 59.01	4 53.02	23 8 29.9	15 43.8	9.990 3231	3 2211	14 36.2
16	16 12 52.03	4 53.74	23 24 13.7	15 8.4	9.987 1020	3 2515	14 37.2
17	16 17 45.77	4 54.41	23 39 22.1	14 32.6	9.983 8505	3 2824	14 38.2
18	16 22 40.18	4 55.04	23 53 54.7	13 56.3	9.980 5681	3 3137	14 39.1
19	16 27 35.22	4 55.62	24 7 51.0	13 19.4	9.977 2544	3 3458	14 40.1
20	16 32 30.84	4 56.15	−24 21 10.4	12 42.2	9.973 9086	3 3783	14 41.1
21	16 37 26.99	4 56.63	24 33 52.6	12 4.4	9.970 5303	3 4113	14 42.1
22	16 42 23.62	4 57.04	24 45 57.0	11 26.2	9.967 1190	3 4447	14 43.1
23	16 47 20.66	4 57.38	24 57 23.2	10 47.7	9.963 6743	3 4787	14 44.1
24	16 52 18.04	4 57.66	25 8 10.9	10 8.8	9.960 1956	3 5131	14 45.1
25	16 57 15.70	4 57.88	25 18 19.7	9 29.5	9.956 6825	3 5478	14 46.2
26	17 2 13.58	4 58.02	−25 27 49.2	8 50.1	9.953 1347	3 5830	14 47.2
27	17 7 11.60	4 58.09	25 36 39.3	8 10.3	9.949 5517	3 6184	14 48.2
28	17 12 9.69	4 58.08	25 44 49.6	7 30.2	9.945 9333	3 6544	14 49.3
29	17 17 7.77	4 57.99	25 52 19.8	6 50.0	9.942 2789	3 6906	14 50.3
30	17 22 5.76	4 57.85	25 59 9.8	6 9.5	9.938 5883	3 7272	14 51.3
31	17 27 3.61	4 57.61	26 5 19.3	5 29.0	9.934 8611	3 7641	14 52.3
Nov. 1	17 32 1.22	4 57.30	−26 10 48.3	4 48.4	9.931 0970	3 8014	14 53.3
2	17 36 58.52	4 56.91	26 15 36.7	4 7.8	9.927 2956	3 8393	14 54.3
3	17 41 55.43	4 56.45	26 19 44.5	3 27.0	9.923 4563	3 8775	14 55.3
4	17 46 51.88	4 55.89	26 23 11.5	2 46.2	9.919 5788	3 9160	14 56.3
5	17 51 47.77	4 55.27	26 25 57.7	2 5.5	9.915 6628	3 9553	14 57.3
6	17 56 43.04	4 54.55	26 28 3.2	1 24.9	9.911 7075	3 9950	14 58.3
7	18 1 37.59	4 53.75	−26 29 28.1	0 44.3	9.907 7125	4 0353	14 59.3
8	18 6 31.34	4 52.87	26 30 12.4	0 3.9	9.903 6772	4 0762	15 0.2
9	18 11 24.21	4 51.91	26 30 16.3	0 36.4	9.899 6010	4 1177	15 1.1
10	18 16 16.12	4 50.85	26 29 39.9	1 16.5	9.895 4833	4 1598	15 2.0
11	18 21 6.97	4 49.71	26 28 23.4	1 56.3	9.891 3235	4 2026	15 2.9
12	18 25 56.68	4 48.48	26 26 27.1	2 36.0	9.887 1209	4 2461	15 3.8
13	18 30 45.16	4 47.16	−26 23 51.1	3 15.2	9.882 8748	4 2904	15 4.7
14	18 35 32.32	4 45.76	26 20 35.9	3 54.3	9.878 5844	4 3356	15 5.5
15	18 40 18.08	4 44.26	26 16 41.6	4 32.8	9.874 2488	4 3814	15 6.3
16	18 45 2.34	4 42.69	26 12 8.8	5 11.1	9.869 8674	4 4282	15 7.1
17	18 49 45.03	4 40.99	26 6 57.7	5 48.8	9.865 4392	4 4760	15 7.8
18	18 54 26.02	4 39.22	26 1 8.9	6 26.2	9.860 9632	4 5244	15 8.5
19	18 59 5.24	4 37.36	−25 54 42.7	7 2.9	9.856 4388	4 5737	15 9.2
20	19 3 42.60	4 35.38	25 47 39.8	7 39.2	9.851 8651	4 6240	15 9.9
21	19 8 17.98	4 33.31	25 40 0.6	8 14.8	9.847 2411	4 6747	15 10.5
22	19 12 51.29	4 31.14	25 31 45.8	8 49.9	9.842 5664	4 7262	15 11.1
23	19 17 22.43	4 28.88	25 22 55.9	9 24.1	9.837 8402	4 7785	15 11.7
24	19 21 51.31		−25 13 31.8		9.833 0617		15 12.2

Tag	0ʰ Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Nov. 24	19 21 51.31	4 26.53	−25 13 31.8	9 57.9	9.833 0617	4 8314	15 12.2
25	19 26 17.84	4 24.07	25 3 33.9	10 30.8	9.828 2303	4 8848	15 12.6
26	19 30 41.91	4 21.53	24 53 3.1	11 3.1	9.823 3455	4 9385	15 13.1
27	19 35 3.44	4 18.89	24 42 0.0	11 34.5	9.818 4070	4 9929	15 13.5
28	19 39 22.33	4 16.16	24 30 25.5	12 5.2	9.813 4141	5 0478	15 13.8
29	19 43 38.49	4 13.35	24 18 20.3	12 35.0	9.808 3663	5 1033	15 14.1
30	19 47 51.84	4 10.44	−24 5 45.3	13 4.2	9.803 2630	5 1592	15 14.4
Dez. 1	19 52 2.28	4 7.46	23 52 41.1	13 32.4	9.798 1038	5 2155	15 14.6
2	19 56 9.74	4 4.38	23 39 8.7	13 59.8	9.792 8883	5 2723	15 14.7
3	20 0 14.12	4 1.22	23 25 8.9	14 26.3	9.787 6160	5 3298	15 14.8
4	20 4 15.34	3 57.98	23 10 42.6	14 51.9	9.782 2862	5 3875	15 14.8
5	20 8 13.32	3 54.63	22 55 50.7	15 16.5	9.776 8987	5 4459	15 14.8
6	20 12 7.95	3 51.21	−22 40 34.2	15 40.2	9.771 4528	5 5045	15 14.8
7	20 15 59.16	3 47.70	22 24 54.0	16 3.0	9.765 9483	5 5638	15 14.6
8	20 19 46.86	3 44.09	22 8 51.0	16 25.0	9.760 3845	5 6235	15 14.4
9	20 23 30.95	3 40.40	21 52 26.0	16 45.7	9.754 7610	5 6835	15 14.2
10	20 27 11.35	3 36.62	21 35 40.3	17 5.6	9.749 0775	5 7439	15 13.9
11	20 30 47.97	3 32.72	21 18 34.7	17 24.6	9.743 3336	5 8049	15 13.5
12	20 34 20.69	3 28.75	−21 1 10.1	17 42.3	9.737 5287	5 8663	15 13.1
13	20 37 49.44	3 24.67	20 43 27.8	17 59.1	9.731 6624	5 9280	15 12.6
14	20 41 14.11	3 20.48	20 25 28.7	18 14.8	9.725 7344	5 9902	15 12.0
15	20 44 34.59	3 16.17	20 7 13.9	18 29.1	9.719 7442	6 0524	15 11.4
16	20 47 50.76	3 11.74	19 48 44.8	18 42.6	9.713 6918	6 1150	15 10.6
17	20 51 2.50	3 7.19	19 30 2.2	18 54.7	9.707 5768	6 1776	15 9.8
18	20 54 9.69	3 2.51	−19 11 7.5	19 5.5	9.701 3992	6 2400	15 9.0
19	20 57 12.20	2 57.68	18 52 2.0	19 15.2	9.695 1592	6 3021	15 8.0
20	21 0 9.88	2 52.72	18 32 46.8	19 23.5	9.688 8571	6 3636	15 7.0
21	21 3 2.60	2 47.58	18 13 23.3	19 30.4	9.682 4935	6 4243	15 5.9
22	21 5 50.18	2 42.30	17 53 52.9	19 36.0	9.676 0692	6 4840	15 4.7
23	21 8 32.48	2 36.88	17 34 16.9	19 40.1	9.669 5852	6 5422	15 3.4
24	21 11 9.36	2 31.26	−17 14 36.8	19 42.9	9.663 0430	6 5985	15 2.0
25	21 13 40.62	2 25.49	16 54 53.9	19 44.3	9.656 4445	6 6528	15 0.5
26	21 16 6.11	2 19.55	16 35 9.6	19 44.0	9.649 7917	6 7047	14 58.9
27	21 18 25.66	2 13.42	16 15 25.6	19 42.4	9.643 0870	6 7538	14 57.3
28	21 20 39.08	2 7.12	15 55 43.2	19 39.1	9.636 3332	6 7997	14 55.5
29	21 22 46.20	2 0.64	15 36 4.1	19 34.4	9.629 5335	6 8421	14 53.6
30	21 24 46.84	1 53.95	−15 16 29.7	19 28.1	9.622 6914	6 8807	14 51.6
31	21 26 40.79	1 47.08	14 57 1.6	19 20.2	9.615 8107	6 9146	14 49.5
32	21 28 27.87		−14 37 41.4		9.608 8961		14 47.3

Tag	0h Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	s	° ′ ″	′ ″			h m
Jan. 0	11 19 43.83	51.72	+7 35 7.0	3 35.4	0.008 9775	3 7601	4 42.3
1	11 20 35.55	49.72	7 31 31.6	3 22.5	0.005 2174	3 7751	4 39.2
2	11 21 25.27	47.71	7 28 9.1	3 9.1	0.001 4423	3 7892	4 36.1
3	11 22 12.98	45.65	7 25 0.0	2 55.7	9.997 6531	3 8022	4 33.0
4	11 22 58.63	43.55	7 22 4.3	2 41.9	9.993 8509	3 8140	4 29.8
5	11 23 42.18	41.42	7 19 22.4	2 28.0	9.990 0369	3 8249	4 26.6
6	11 24 23.60	39.25	+7 16 54.4	2 13.8	9.986 2120	3 8346	4 23.3
7	11 25 2.85	37.04	7 14 40.6	1 59.3	9.982 3774	3 8430	4 20.0
8	11 25 39.89	34.79	7 12 41.3	1 44.7	9.978 5344	3 8501	4 16.7
9	11 26 14.68	32.49	7 10 56.6	1 29.6	9.974 6843	3 8559	4 13.3
10	11 26 47.17	30.17	7 9 27.0	1 14.6	9.970 8284	3 8605	4 9.9
11	11 27 17.34	27.79	7 8 12.4	0 59.1	9.966 9679	3 8636	4 6.5
12	11 27 45.13	25.37	+7 7 13.3	0 43.5	9.963 1043	3 8651	4 3.0
13	11 28 10.50	22.92	7 6 29.8	0 27.6	9.959 2392	3 8649	3 59.5
14	11 28 33.42	20.41	7 6 2.2	0 11.5	9.955 3743	3 8627	3 55.9
15	11 28 53.83	17.87	7 5 50.7	0 4.8	9.951 5116	3 8586	3 52.3
16	11 29 11.70	15.26	7 5 55.5	0 21.4	9.947 6530	3 8526	3 48.7
17	11 29 26.96	12.62	7 6 16.9	0 38.2	9.943 8004	3 8442	3 45.0
18	11 29 39.58	9.93	+7 6 55.1	0 55.2	9.939 9562	3 8337	3 41.3
19	11 29 49.51	7.21	7 7 50.3	1 12.5	9.936 1225	3 8207	3 37.5
20	11 29 56.72	4.45	7 9 2.8	1 29.8	9.932 3018	3 8050	3 33.7
21	11 30 1.17	1.64	7 10 32.6	1 47.2	9.928 4968	3 7866	3 29.8
22	11 30 2.81	1.21	7 12 19.8	2 4.8	9.924 7102	3 7651	3 25.9
23	11 30 1.60	4.08	7 14 24.6	2 22.5	9.920 9451	3 7405	3 22.0
24	11 29 57.52	6.99	+7 16 47.1	2 40.2	9.917 2046	3 7127	3 18.0
25	11 29 50.53	9.92	7 19 27.3	2 57.8	9.913 4919	3 6816	3 13.9
26	11 29 40.61	12.86	7 22 25.1	3 15.5	9.909 8103	3 6472	3 9.8
27	11 29 27.75	15.84	7 25 40.6	3 33.2	9.906 1631	3 6092	3 5.6
28	11 29 11.91	18.81	7 29 13.8	3 50.5	9.902 5539	3 5676	3 1.4
29	11 28 53.10	21.81	7 33 4.3	4 7.9	9.898 9863	3 5226	2 57.2
30	11 28 31.29	24.79	+7 37 12.2	4 24.9	9.895 4637	3 4740	2 52.9
31	11 28 6.50	27.78	7 41 37.1	4 41.8	9.891 9897	3 4217	2 48.5
Febr. 1	11 27 38.72	30.77	7 46 18.9	4 58.5	9.888 5680	3 3657	2 44.1
2	11 27 7.95	33.75	7 51 17.4	5 14.8	9.885 2023	3 3060	2 39.7
3	11 26 34.20	36.72	7 56 32.2	5 31.0	9.881 8963	3 2425	2 35.2
4	11 25 57.48	39.67	8 2 3.2	5 46.7	9.878 6538	3 1751	2 30.6
5	11 25 17.81	42.61	+8 7 49.9	6 2.0	9.875 4787	3 1038	2 26.0
6	11 24 35.20	45.52	8 13 51.9	6 17.0	9.872 3749	3 0285	2 21.4
7	11 23 49.68	48.39	8 20 8.9	6 31.3	9.869 3464	2 9494	2 16.7
8	11 23 1.29	51.22	8 26 40.2	6 45.3	9.866 3970	2 8663	2 12.0
9	11 22 10.07	54.03	8 33 25.5	6 58.7	9.863 5307	2 7791	2 7.2
10	11 21 16.04		+8 40 24.2		9.860 7516		2 2.4

Tag		0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933		h m s	m s	° ′ ″	′ ″			h m
Febr.	10	11 21 16.04	0 56.78	+ 8 40 24.2	7 11.7	9.860 7516	2 6881	2 2.4
	11	11 20 19.26	0 59.47	8 47 35.9	7 24.0	9.858 0635	2 5931	1 57.5
	12	11 19 19.79	1 2.11	8 54 59.9	7 35.5	9.855 4704	2 4940	1 52.6
	13	11 18 17.68	1 4.68	9 2 35.4	7 46.5	9.852 9764	2 3910	1 47.6
	14	11 17 13.00	1 7.19	9 10 21.9	7 56.8	9.850 5854	2 2839	1 42.6
	15	11 16 5.81	1 9.61	9 18 18.7	8 6.2	9.848 3015	2 1730	1 37.6
	16	11 14 56.20	1 11.95	+ 9 26 24.9	8 14.8	9.846 1285	2 0583	1 32.5
	17	11 13 44.25	1 14.17	9 34 39.7	8 22.5	9.844 0702	1 9397	1 27.4
	18	11 12 30.08	1 16.30	9 43 2.2	8 29.3	9.842 1305	1 8174	1 22.2
	19	11 11 13.78	1 18.31	9 51 31.5	8 35.1	9.840 3131	1 6917	1 17.0
	20	11 9 55.47	1 20.20	10 0 6.6	8 39.9	9.838 6214	1 5624	1 11.8
	21	11 8 35.27	1 21.94	10 8 46.5	8 43.5	9.837 0590	1 4301	1 6.5
	22	11 7 13.33	1 23.56	+10 17 30.0	8 46.1	9.835 6289	1 2951	1 1.2
	23	11 5 49.77	1 25.02	10 26 16.1	8 47.5	9.834 3338	1 1575	0 55.9
	24	11 4 24.75	1 26.32	10 35 3.6	8 47.8	9.833 1763	1 0176	0 50.6
	25	11 2 58.43	1 27.46	10 43 51.4	8 46.9	9.832 1587	8758	0 45.2
	26	11 1 30.97	1 28.44	10 52 38.3	8 45.0	9.831 2829	7326	0 39.8
	27	11 0 2.53	1 29.24	11 1 23.3	8 41.7	9.830 5503	5883	0 34.4
	28	10 58 33.29	1 29.86	+11 10 5.0	8 37.4	9.829 9620	4432	0 29.0
März	1	10 57 3.43	1 30.33	11 18 42.4	8 32.1	9.829 5188	2977	0 23.6
	2	10 55 33.10	1 30.61	11 27 14.5	8 25.5	9.829 2211	1520	0 18.2
	3	10 54 2.49	1 30.71	11 35 40.0	8 18.0	9.829 0691	66	0 12.7
	4	10 52 31.78	1 30.66	11 43 58.0	8 9.5	9.829 0625	1383	0 7.3
	5	10 51 1.12	1 30.42	11 52 7.5	8 0.1	9.829 2008	2823	{ 0 1.9 / 23 56.4 }
	6	10 49 30.70	1 30.00	+12 0 7.6	7 49.6	9.829 4831	4250	23 51.0
	7	10 48 0.70	1 29.43	12 7 57.2	7 38.4	9.829 9081	5663	23 45.6
	8	10 46 31.27	1 28.69	12 15 35.6	7 26.3	9.830 4744	7059	23 40.2
	9	10 45 2.58	1 27.79	12 23 1.9	7 13.5	9.831 1803	8434	23 34.8
	10	10 43 34.79	1 26.73	12 30 15.4	6 59.9	9.832 0237	9787	23 29.4
	11	10 42 8.06	1 25.52	12 37 15.3	6 45.7	9.833 0024	1 1117	23 24.1
	12	10 40 42.54	1 24.18	+12 44 1.0	6 31.0	9.834 1141	1 2420	23 18.8
	13	10 39 18.36	1 22.69	12 50 32.0	6 15.7	9.835 3561	1 3694	23 13.5
	14	10 37 55.67	1 21.06	12 56 47.7	5 59.8	9.836 7255	1 4940	23 8.2
	15	10 36 34.61	1 19.30	13 2 47.5	5 43.6	9.838 2195	1 6157	23 2.9
	16	10 35 15.31	1 17.43	13 8 31.1	5 26.9	9.839 8352	1 7341	22 57.7
	17	10 33 57.88	1 15.42	13 13 58.0	5 9.8	9.841 5693	1 8492	22 52.5
	18	10 32 42.46	1 13.31	+13 19 7.8	4 52.4	9.843 4185	1 9611	22 47.4
	19	10 31 29.15	1 11.08	13 24 0.2	4 34.6	9.845 3796	2 0692	22 42.3
	20	10 30 18.07	1 8.74	13 28 34.8	4 16.6	9.847 4488	2 1738	22 37.2
	21	10 29 9.33	1 6.32	13 32 51.4	3 58.4	9.849 6226	2 2745	22 32.2
	22	10 28 3.01	1 3.78	13 36 49.8	3 39.8	9.851 8971	2 3711	22 27.2
	23	10 26 59.23		+13 40 29.6		9.854 2682		22 22.2

Tag		0ʰ Welt-Zeit						Obere Kulmination in Greenwich
		Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933		h m s	s	° ′ ″	′ ″			h m
März	23	10 26 59.23	61.18	+13 40 29.6	3 21.3	9.854 2682	2 4637	22 22.2
	24	10 25 58.05	58.49	13 43 50.9	3 2.6	9.856 7319	2 5522	22 17.3
	25	10 24 59.56	55.74	13 46 53.5	2 43.9	9.859 2841	2 6365	22 12.5
	26	10 24 3.82	52.91	13 49 37.4	2 25.1	9.861 9206	2 7165	22 7.7
	27	10 23 10.91	50.04	13 52 2.5	2 6.3	9.864 6371	2 7923	22 2.9
	28	10 22 20.87	47.12	13 54 8.8	1 47.6	9.867 4294	2 8640	21 58.2
	29	10 21 33.75	44.17	+13 55 56.4	1 29.0	9.870 2934	2 9314	21 53.5
	30	10 20 49.58	41.19	13 57 25.4	1 10.5	9.873 2248	2 9947	21 48.9
	31	10 20 8.39	38.19	13 58 35.9	0 52.2	9.876 2195	3 0539	21 44.3
April	1	10 19 30.20	35.16	13 59 28.1	0 34.1	9.879 2734	3 1089	21 39.8
	2	10 18 55.04	32.14	14 0 2.2	0 16.2	9.882 3823	3 1602	21 35.3
	3	10 18 22.90	29.11	14 0 18.4	0 1.4	9.885 5425	3 2076	21 30.9
	4	10 17 53.79	26.08	+14 0 17.0	0 18.9	9.888 7501	3 2515	21 26.5
	5	10 17 27.71	23.07	13 59 58.1	0 36.0	9.892 0016	3 2916	21 22.2
	6	10 17 4.64	20.07	13 59 22.1	0 52.9	9.895 2932	3 3285	21 18.0
	7	10 16 44.57	17.08	13 58 29.2	1 9.5	9.898 6217	3 3621	21 13.7
	8	10 16 27.49	14.13	13 57 19.7	1 25.7	9.901 9838	3 3926	21 9.6
	9	10 16 13.36	11.20	13 55 54.0	1 41.7	9.905 3764	3 4200	21 5.5
	10	10 16 2.16	8.30	+13 54 12.3	1 57.4	9.908 7964	3 4447	21 1.4
	11	10 15 53.86	5.43	13 52 14.9	2 12.8	9.912 2411	3 4668	20 57.4
	12	10 15 48.43	2.59	13 50 2.1	2 27.9	9.915 7079	3 4864	20 53.4
	13	10 15 45.84	0.21	13 47 34.2	2 42.7	9.919 1943	3 5038	20 49.4
	14	10 15 46.05	2.99	13 44 51.5	2 57.4	9.922 6981	3 5187	20 45.5
	15	10 15 49.04	5.72	13 41 54.1	3 11.6	9.926 2168	3 5317	20 41.7
	16	10 15 54.76	8.42	+13 38 42.5	3 25.9	9.929 7485	3 5425	20 37.9
	17	10 16 3.18	11.09	13 35 16.6	3 39.7	9.933 2910	3 5512	20 34.1
	18	10 16 14.27	13.72	13 31 36.9	3 53.4	9.936 8422	3 5581	20 30.4
	19	10 16 27.99	16.32	13 27 43.5	4 6.9	9.940 4003	3 5629	20 26.8
	20	10 16 44.31	18.89	13 23 36.6	4 20.2	9.943 9632	3 5659	20 23.2
	21	10 17 3.20	21.40	13 19 16.4	4 33.3	9.947 5291	3 5669	20 19.6
	22	10 17 24.60	23.89	+13 14 43.1	4 46.2	9.951 0960	3 5663	20 16.0
	23	10 17 48.49	26.34	13 9 56.9	4 58.7	9.954 6623	3 5640	20 12.5
	24	10 18 14.83	28.73	13 4 58.2	5 11.3	9.958 2263	3 5599	20 9.0
	25	10 18 43.56	31.10	12 59 46.9	5 23.4	9.961 7862	3 5544	20 5.6
	26	10 19 14.66	33.40	12 54 23.5	5 35.6	9.965 3406	3 5475	20 2.2
	27	10 19 48.06	35.66	12 48 47.9	5 47.4	9.968 8881	3 5389	19 58.9
	28	10 20 23.72	37.89	+12 43 0.5	5 58.9	9.972 4270	3 5292	19 55.6
	29	10 21 1.61	40.07	12 37 1.6	6 10.2	9.975 9562	3 5182	19 52.3
	30	10 21 41.68	42.19	12 30 51.4	6 21.5	9.979 4744	3 5060	19 49.1
Mai	1	10 22 23.87	44.28	12 24 29.9	6 32.5	9.982 9804	3 4927	19 45.9
	2	10 23 8.15	46.30	12 17 57.4	6 43.2	9.986 4731	3 4785	19 42.7
	3	10 23 54.45		+12 11 14.2		9.989 9516		19 39.6

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Mai 3	10 23 54.45	0 48.29	+12 11 14.2	6 53.8	9.989 9516	3 4633	19 39.6
4	10 24 42.74	0 50.23	12 4 20.4	7 4.1	9.993 4149	3 4473	19 36.5
5	10 25 32.97	0 52.12	11 57 16.3	7 14.3	9.996 8622	3 4304	19 33.4
6	10 26 25.09	0 53.97	11 50 2.0	7 24.2	0.000 2926	3 4130	19 30.3
7	10 27 19.06	0 55.78	11 42 37.8	7 34.0	0.003 7056	3 3949	19 27.3
8	10 28 14.84	0 57.53	11 35 3.8	7 43.5	0.007 1005	3 3763	19 24.3
9	10 29 12.37	0 59.25	+11 27 20.3	7 52.9	0.010 4768	3 3574	19 21.4
10	10 30 11.62	1 0.92	11 19 27.4	8 2.2	0.013 8342	3 3381	19 18.5
11	10 31 12.54	1 2.55	11 11 25.2	8 11.2	0.017 1723	3 3185	19 15.6
12	10 32 15.09	1 4.15	11 3 14.0	8 20.2	0.020 4908	3 2988	19 12.7
13	10 33 19.24	1 5.72	10 54 53.8	8 29.0	0.023 7896	3 2786	19 9.9
14	10 34 24.96	1 7.24	10 46 24.8	8 37.8	0.027 0682	3 2582	19 7.0
15	10 35 32.20	1 8.75	+10 37 47.0	8 46.3	0.030 3264	3 2377	19 4.2
16	10 36 40.95	1 10.22	10 29 0.7	8 54.9	0.033 5641	3 2168	19 1.4
17	10 37 51.17	1 11.67	10 20 5.8	9 3.3	0.036 7809	3 1955	18 58.7
18	10 39 2.84	1 13.08	10 11 2.5	9 11.7	0.039 9764	3 1741	18 56.0
19	10 40 15.92	1 14.46	10 1 50.8	9 19.9	0.043 1505	3 1524	18 53.3
20	10 41 30.38	1 15.83	9 52 30.9	9 28.0	0.046 3029	3 1303	18 50.6
21	10 42 46.21	1 17.15	+ 9 43 2.9	9 36.0	0.049 4332	3 1080	18 47.9
22	10 44 3.36	1 18.46	9 33 26.9	9 43.9	0.052 5412	3 0855	18 45.3
23	10 45 21.82	1 19.72	9 23 43.0	9 51.7	0.055 6267	3 0627	18 42.7
24	10 46 41.54	1 20.97	9 13 51.3	9 59.5	0.058 6894	3 0397	18 40.1
25	10 48 2.51	1 22.20	9 3 51.8	10 7.1	0.061 7291	3 0166	18 37.5
26	10 49 24.71	1 23.38	8 53 44.7	10 14.5	0.064 7457	2 9931	18 35.0
27	10 50 48.09	1 24.55	+ 8 43 30.2	10 22.0	0.067 7388	2 9697	18 32.4
28	10 52 12.64	1 25.69	8 33 8.2	10 29.2	0.070 7085	2 9459	18 29.9
29	10 53 38.33	1 26.79	8 22 39.0	10 36.4	0.073 6544	2 9220	18 27.4
30	10 55 5.12	1 27.89	8 12 2.6	10 43.3	0.076 5764	2 8981	18 25.0
31	10 56 33.01	1 28.94	8 1 19.3	10 50.1	0.079 4745	2 8742	18 22.5
Juni 1	10 58 1.95	1 29.99	7 50 29.2	10 56.8	0.082 3487	2 8501	18 20.1
2	10 59 31.94	1 31.00	+ 7 39 32.4	11 3.4	0.085 1988	2 8262	18 17.6
3	11 1 2.94	1 31.98	7 28 29.0	11 10.0	0.088 0250	2 8022	18 15.2
4	11 2 34.92	1 32.94	7 17 19.0	11 16.4	0.090 8272	2 7783	18 12.8
5	11 4 7.86	1 33.89	7 6 2.6	11 22.5	0.093 6055	2 7545	18 10.5
6	11 5 41.75	1 34.80	6 54 40.1	11 28.7	0.096 3600	2 7311	18 8.1
7	11 7 16.55	1 35.70	6 43 11.4	11 34.8	0.099 0911	2 7076	18 5.7
8	11 8 52.25	1 36.58	+ 6 31 36.6	11 40.7	0.101 7987	2 6846	18 3.4
9	11 10 28.83	1 37.45	6 19 55.9	11 46.5	0.104 4833	2 6617	18 1.1
10	11 12 6.28	1 38.30	6 8 9.4	11 52.3	0.107 1450	2 6390	17 58.8
11	11 13 44.58	1 39.13	5 56 17.1	11 58.0	0.109 7840	2 6164	17 56.5
12	11 15 23.71	1 39.95	5 44 19.1	12 3.6	0.112 4004	2 5940	17 54.2
13	11 17 3.66		+ 5 32 15.5		0.114 9944		17 52.0

Tag	0h Welt-Zeit: Scheinbare Rektaszension		0h Welt-Zeit: Scheinbare Deklination		0h Welt-Zeit: log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Juni 13	11 17 3.66	1 40.77	+5 32 15.5	12 9.2	0.114 9944	2 5719	17 52.0
14	11 18 44.43	1 41.58	5 20 6.3	12 14.6	0.117 5663	2 5497	17 49.7
15	11 20 26.01	1 42.36	5 7 51.7	12 20.0	0.120 1160	2 5277	17 47.5
16	11 22 8.37	1 43.15	4 55 31.7	12 25.3	0.122 6437	2 5059	17 45.2
17	11 23 51.52	1 43.92	4 43 6.4	12 30.7	0.125 1496	2 4839	17 43.0
18	11 25 35.44	1 44.69	4 30 35.7	12 35.8	0.127 6335	2 4621	17 40.8
19	11 27 20.13	1 45.43	+4 17 59.9	12 40.9	0.130 0956	2 4404	17 38.7
20	11 29 5.56	1 46.17	4 5 19.0	12 46.0	0.132 5360	2 4186	17 36.5
21	11 30 51.73	1 46.90	3 52 33.0	12 50.8	0.134 9546	2 3970	17 34.3
22	11 32 38.63	1 47.63	3 39 42.2	12 55.8	0.137 3516	2 3752	17 32.2
23	11 34 26.26	1 48.34	3 26 46.4	13 0.4	0.139 7268	2 3536	17 30.0
24	11 36 14.60	1 49.03	3 13 46.0	13 5.1	0.142 0804	2 3322	17 27.9
25	11 38 3.63	1 49.73	+3 0 40.9	13 9.6	0.144 4126	2 3106	17 25.8
26	11 39 53.36	1 50.41	2 47 31.3	13 14.1	0.146 7232	2 2893	17 23.7
27	11 41 43.77	1 51.09	2 34 17.2	13 18.3	0.149 0125	2 2679	17 21.6
28	11 43 34.86	1 51.74	2 20 58.9	13 22.6	0.151 2804	2 2467	17 19.5
29	11 45 26.60	1 52.40	2 7 36.3	13 26.7	0.153 5271	2 2256	17 17.4
30	11 47 19.00	1 53.04	1 54 9.6	13 30.6	0.155 7527	2 2046	17 15.4
Juli 1	11 49 12.04	1 53.67	+1 40 39.0	13 34.4	0.157 9573	2 1837	17 13.3
2	11 51 5.71	1 54.29	1 27 4.6	13 38.1	0.160 1410	2 1631	17 11.3
3	11 53 0.00	1 54.91	1 13 26.5	13 41.8	0.162 3041	2 1426	17 9.3
4	11 54 54.91	1 55.51	0 59 44.7	13 45.3	0.164 4467	2 1224	17 7.3
5	11 56 50.42	1 56.12	0 45 59.4	13 48.6	0.166 5691	2 1025	17 5.3
6	11 58 46.54	1 56.71	0 32 10.8	13 52.0	0.168 6716	2 0828	17 3.3
7	12 0 43.25	1 57.30	+0 18 18.8	13 55.1	0.170 7544	2 0634	17 1.3
8	12 2 40.55	1 57.89	+0 4 23.7	13 58.2	0.172 8178	2 0444	16 59.3
9	12 4 38.44	1 58.47	−0 9 34.5	14 1.3	0.174 8622	2 0255	16 57.3
10	12 6 36.91	1 59.06	0 23 35.8	14 4.3	0.176 8877	2 0068	16 55.4
11	12 8 35.97	1 59.64	0 37 40.1	14 7.1	0.178 8945	1 9882	16 53.4
12	12 10 35.61	2 0.23	0 51 47.2	14 9.9	0.180 8827	1 9700	16 51.5
13	12 12 35.84	2 0.81	−1 5 57.1	14 12.6	0.182 8527	1 9519	16 49.5
14	12 14 36.65	2 1.39	1 20 9.7	14 15.2	0.184 8046	1 9338	16 47.6
15	12 16 38.04	2 1.97	1 34 24.9	14 17.8	0.186 7384	1 9159	16 45.7
16	12 18 40.01	2 2.55	1 48 42.7	14 20.2	0.188 6543	1 8981	16 43.8
17	12 20 42.56	2 3.14	2 3 2.9	14 22.6	0.190 5524	1 8804	16 41.9
18	12 22 45.70	2 3.72	2 17 25.5	14 24.9	0.192 4328	1 8628	16 40.0
19	12 24 49.42	2 4.31	−2 31 50.4	14 27.0	0.194 2956	1 8452	16 38.2
20	12 26 53.73	2 4.89	2 46 17.4	14 29.1	0.196 1408	1 8277	16 36.3
21	12 28 58.62	2 5.46	3 0 46.5	14 31.0	0.197 9685	1 8103	16 34.4
22	12 31 4.08	2 6.05	3 15 17.5	14 32.8	0.199 7788	1 7929	16 32.6
23	12 33 10.13	2 6.62	3 29 50.3	14 34.6	0.201 5717	1 7757	16 30.8
24	12 35 16.75		−3 44 24.9		0.203 3474		16 29.0

Tag		0h Welt-Zeit Scheinbare Rektaszension	Diff.	Scheinbare Deklination	Diff.	log Δ	Diff.	Obere Kulmination in Greenwich
1933		h m s	m s	° ′ ″	′ ″			h m
Juli	24	12 35 16.75	2 7.20	− 3 44 24.9	14 36.2	0.203 3474	1 7585	16 29.0
	25	12 37 23.95	2 7.78	3 59 1.1	14 37.7	0.205 1059	1 7414	16 27.2
	26	12 39 31.73	2 8.36	4 13 38.8	14 38.8	0.206 8473	1 7244	16 25.4
	27	12 41 40.09	2 8.93	4 28 17.6	14 40.1	0.208 5717	1 7074	16 23.6
	28	12 43 49.02	2 9.50	4 42 57.7	14 41.2	0.210 2791	1 6908	16 21.8
	29	12 45 58.52	2 10.08	4 57 38.9	14 42.2	0.211 9699	1 6741	16 20.0
	30	12 48 8.60	2 10.64	− 5 12 21.1	14 43.0	0.213 6440	1 6576	16 18.2
	31	12 50 19.24	2 11.21	5 27 4.1	14 43.6	0.215 3016	1 6413	16 16.5
Aug.	1	12 52 30.45	2 11.78	5 41 47.7	14 44.2	0.216 9429	1 6252	16 14.7
	2	12 54 42.23	2 12.34	5 56 31.9	14 44.5	0.218 5681	1 6094	16 13.0
	3	12 56 54.57	2 12.90	6 11 16.4	14 44.8	0.220 1775	1 5937	16 11.3
	4	12 59 7.47	2 13.48	6 26 1.2	14 45.0	0.221 7712	1 5783	16 9.5
	5	13 1 20.95	2 14.05	− 6 40 46.2	14 45.0	0.223 3495	1 5632	16 7.8
	6	13 3 35.00	2 14.62	6 55 31.2	14 45.0	0.224 9127	1 5483	16 6.1
	7	13 5 49.62	2 15.20	7 10 16.2	14 44.9	0.226 4610	1 5336	16 4.4
	8	13 8 4.82	2 15.79	7 25 1.1	14 44.5	0.227 9946	1 5192	16 2.8
	9	13 10 20.61	2 16.37	7 39 45.6	14 44.3	0.229 5138	1 5047	16 1.1
	10	13 12 36.98	2 16.97	7 54 29.9	14 43.7	0.231 0185	1 4905	15 59.4
	11	13 14 53.95	2 17.56	− 8 9 13.6	14 43.0	0.232 5090	1 4765	15 57.8
	12	13 17 11.51	2 18.15	8 23 56.6	14 42.4	0.233 9855	1 4625	15 56.1
	13	13 19 29.66	2 18.77	8 38 39.0	14 41.6	0.235 4480	1 4487	15 54.5
	14	13 21 48.43	2 19.38	8 53 20.6	14 40.5	0.236 8967	1 4348	15 52.9
	15	13 24 7.81	2 20.00	9 8 1.1	14 39.5	0.238 3315	1 4212	15 51.3
	16	13 26 27.81	2 20.62	9 22 40.6	14 38.3	0.239 7527	1 4074	15 49.7
	17	13 28 48.43	2 21.25	− 9 37 18.9	14 36.9	0.241 1601	1 3938	15 48.1
	18	13 31 9.68	2 21.88	9 51 55.8	14 35.4	0.242 5539	1 3804	15 46.5
	19	13 33 31.56	2 22.50	10 6 31.2	14 33.8	0.243 9343	1 3669	15 44.9
	20	13 35 54.06	2 23.14	10 21 5.0	14 32.0	0.245 3012	1 3535	15 43.4
	21	13 38 17.20	2 23.77	10 35 37.0	14 30.0	0.246 6547	1 3402	15 41.8
	22	13 40 40.97	2 24.42	10 50 7.0	14 28.0	0.247 9949	1 3269	15 40.3
	23	13 43 5.39	2 25.06	−11 4 35.0	14 25.8	0.249 3218	1 3137	15 38.8
	24	13 45 30.45	2 25.70	11 19 0.8	14 23.3	0.250 6355	1 3006	15 37.2
	25	13 47 56.15	2 26.35	11 33 24.1	14 20.7	0.251 9361	1 2876	15 35.7
	26	13 50 22.50	2 27.00	11 47 44.8	14 18.1	0.253 2237	1 2746	15 34.2
	27	13 52 49.50	2 27.64	12 2 2.9	14 15.1	0.254 4983	1 2617	15 32.8
	28	13 55 17.14	2 28.30	12 16 18.0	14 12.1	0.255 7600	1 2491	15 31.3
	29	13 57 45.44	2 28.94	−12 30 30.1	14 8.8	0.257 0091	1 2365	15 29.8
	30	14 0 14.38	2 29.60	12 44 38.9	14 5.5	0.258 2456	1 2243	15 28.4
	31	14 2 43.98	2 30.25	12 58 44.4	14 1.9	0.259 4699	1 2122	15 26.9
Sept.	1	14 5 14.23	2 30.90	13 12 46.3	13 58.2	0.260 6821	1 2003	15 25.5
	2	14 7 45.13	2 31.57	13 26 44.5	13 54.4	0.261 8824	1 1885	15 24.1
	3	14 10 16.70		−13 40 38.9		0.263 0709		15 22.7

Tag		Scheinbare Rektaszension (0h Welt-Zeit)		Scheinbare Deklination (0h Welt-Zeit)		log Δ (0h Welt-Zeit)		Obere Kulmination in Greenwich
1933		h m s	m s	° ′ ″	′ ″			h m
Sept.	3	14 10 16.70	2 32.23	−13 40 38.9	13 50.4	0.263 0709	1 1772	15 22.7
	4	14 12 48.93	2 32.90	13 54 29.3	13 46.2	0.264 2481	1 1658	15 21.3
	5	14 15 21.83	2 33.57	14 8 15.5	13 41.9	0.265 4139	1 1548	15 19.9
	6	14 17 55.40	2 34.25	14 21 57.4	13 37.5	0.266 5687	1 1438	15 18.5
	7	14 20 29.65	2 34.94	14 35 34.9	13 32.9	0.267 7125	1 1329	15 17.1
	8	14 23 4.59	2 35.64	14 49 7.8	13 28.0	0.268 8454	1 1221	15 15.8
	9	14 25 40.23	2 36.33	−15 2 35.8	13 23.2	0.269 9675	1 1115	15 14.5
	10	14 28 16.56	2 37.03	15 15 59.0	13 18.1	0.271 0790	1 1010	15 13.1
	11	14 30 53.59	2 37.74	15 29 17.1	13 12.9	0.272 1800	1 0904	15 11.8
	12	14 33 31.33	2 38.44	15 42 30.0	13 7.6	0.273 2704	1 0802	15 10.5
	13	14 36 9.77	2 39.16	15 55 37.6	13 2.0	0.274 3506	1 0698	15 9.2
	14	14 38 48.93	2 39.88	16 8 39.6	12 56.2	0.275 4204	1 0596	15 7.9
	15	14 41 28.81	2 40.60	−16 21 35.8	12 50.3	0.276 4800	1 0493	15 6.7
	16	14 44 9.41	2 41.32	16 34 26.1	12 44.3	0.277 5293	1 0391	15 5.4
	17	14 46 50.73	2 42.05	16 47 10.4	12 38.0	0.278 5684	1 0291	15 4.2
	18	14 49 32.78	2 42.78	16 59 48.4	12 31.6	0.279 5975	1 0189	15 2.9
	19	14 52 15.56	2 43.51	17 12 20.0	12 24.9	0.280 6164	1 0089	15 1.7
	20	14 54 59.07	2 44.24	17 24 44.9	12 18.1	0.281 6253	9989	15 0.5
	21	14 57 43.31	2 44.98	−17 37 3.0	12 11.1	0.282 6242	9889	14 59.3
	22	15 0 28.29	2 45.70	17 49 14.1	12 3.8	0.283 6131	9791	14 58.1
	23	15 3 13.99	2 46.43	18 1 17.9	11 56.5	0.284 5922	9692	14 56.9
	24	15 6 0.42	2 47.16	18 13 14.4	11 48.9	0.285 5614	9596	14 55.8
	25	15 8 47.58	2 47.88	18 25 3.3	11 41.0	0.286 5210	9499	14 54.6
	26	15 11 35.46	2 48.60	18 36 44.3	11 33.2	0.287 4709	9404	14 53.5
	27	15 14 24.06	2 49.32	−18 48 17.5	11 25.0	0.288 4113	9311	14 52.4
	28	15 17 13.38	2 50.05	18 59 42.5	11 16.6	0.289 3424	9219	14 51.3
	29	15 20 3.43	2 50.76	19 10 59.1	11 8.0	0.290 2643	9130	14 50.2
	30	15 22 54.19	2 51.48	19 22 7.1	10 59.4	0.291 1773	9042	14 49.1
Okt.	1	15 25 45.67	2 52.20	19 33 6.5	10 50.5	0.292 0815	8956	14 48.0
	2	15 28 37.87	2 52.91	19 43 57.0	10 41.4	0.292 9771	8871	14 46.9
	3	15 31 30.78	2 53.63	−19 54 38.4	10 32.1	0.293 8642	8789	14 45.9
	4	15 34 24.41	2 54.34	20 5 10.5	10 22.6	0.294 7431	8707	14 44.8
	5	15 37 18.75	2 55.06	20 15 33.1	10 13.2	0.295 6138	8626	14 43.8
	6	15 40 13.81	2 55.78	20 25 46.3	10 3.3	0.296 4764	8548	14 42.8
	7	15 43 9.59	2 56.49	20 35 49.6	9 53.4	0.297 3312	8470	14 41.8
	8	15 46 6.08	2 57.20	20 45 43.0	9 43.2	0.298 1782	8393	14 40.8
	9	15 49 3.28	2 57.92	−20 55 26.2	9 32.9	0.299 0175	8316	14 39.8
	10	15 52 1.20	2 58.62	21 4 59.1	9 22.4	0.299 8491	8241	14 38.8
	11	15 54 59.82	2 59.34	21 14 21.5	9 11.7	0.300 6732	8165	14 37.9
	12	15 57 59.16	3 0.04	21 23 33.2	9 0.8	0.301 4897	8091	14 37.0
	13	16 0 59.20	3 0.74	21 32 34.0	8 49.8	0.302 2988	8016	14 36.0
	14	16 3 59.94		−21 41 23.8		0.303 1004		14 35.1

Mars 1933

Tag	Scheinbare Rektaszension (0h Welt-Zeit)	Diff.	Scheinbare Deklination (0h Welt-Zeit)	Diff.	log Δ (0h Welt-Zeit)	Diff.	Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Okt. 14	16 3 59.94	3 1.45	−21 41 23.8	8 38.6	0.303 1004	7944	14 35.1
15	16 7 1.39	3 2.13	21 50 2.4	8 27.2	0.303 8948	7870	14 34.2
16	16 10 3.52	3 2.83	21 58 29.6	8 15.5	0.304 6818	7796	14 33.3
17	16 13 6.35	3 3.51	22 6 45.1	8 3.7	0.305 4614	7724	14 32.4
18	16 16 9.86	3 4.17	22 14 48.8	7 51.8	0.306 2338	7650	14 31.5
19	16 19 14.03	3 4.84	22 22 40.6	7 39.5	0.306 9988	7578	14 30.6
20	16 22 18.87	3 5.50	−22 30 20.1	7 27.3	0.307 7566	7505	14 29.8
21	16 25 24.37	3 6.16	22 37 47.4	7 14.7	0.308 5071	7434	14 29.0
22	16 28 30.53	3 6.79	22 45 2.1	7 2.2	0.309 2505	7364	14 28.1
23	16 31 37.32	3 7.41	22 52 4.3	6 49.2	0.309 9869	7293	14 27.3
24	16 34 44.73	3 8.03	22 58 53.5	6 36.3	0.310 7162	7223	14 26.5
25	16 37 52.76	3 8.63	23 5 29.8	6 22.9	0.311 4385	7157	14 25.7
26	16 41 1.39	3 9.21	−23 11 52.7	6 9.6	0.312 1542	7091	14 24.9
27	16 44 10.60	3 9.80	23 18 2.3	5 56.1	0.312 8633	7024	14 24.1
28	16 47 20.40	3 10.36	23 23 58.4	5 42.4	0.313 5657	6962	14 23.3
29	16 50 30.76	3 10.92	23 29 40.8	5 28.6	0.314 2619	6901	14 22.6
30	16 53 41.68	3 11.46	23 35 9.4	5 14.7	0.314 9520	6839	14 21.8
31	16 56 53.14	3 11.99	23 40 24.1	5 0.5	0.315 6359	6782	14 21.1
Nov. 1	17 0 5.13	3 12.53	−23 45 24.6	4 46.4	0.316 3141	6724	14 20.3
2	17 3 17.66	3 13.03	23 50 11.0	4 32.0	0.316 9865	6667	14 19.6
3	17 6 30.69	3 13.54	23 54 43.0	4 17.4	0.317 6532	6612	14 18.9
4	17 9 44.23	3 14.04	23 59 0.4	4 2.8	0.318 3144	6558	14 18.2
5	17 12 58.27	3 14.52	24 3 3.2	3 48.1	0.318 9702	6505	14 17.5
6	17 16 12.79	3 14.98	24 6 51.3	3 33.1	0.319 6207	6453	14 16.8
7	17 19 27.77	3 15.43	−24 10 24.4	3 18.1	0.320 2660	6400	14 16.1
8	17 22 43.20	3 15.89	24 13 42.5	3 3.0	0.320 9060	6349	14 15.4
9	17 25 59.09	3 16.31	24 16 45.5	2 47.7	0.321 5409	6299	14 14.7
10	17 29 15.40	3 16.72	24 19 33.2	2 32.3	0.322 1708	6247	14 14.1
11	17 32 32.12	3 17.14	24 22 5.5	2 16.9	0.322 7955	6197	14 13.4
12	17 35 49.26	3 17.52	24 24 22.4	2 1.3	0.323 4152	6148	14 12.8
13	17 39 6.78	3 17.89	−24 26 23.7	1 45.7	0.324 0300	6098	14 12.1
14	17 42 24.67	3 18.25	24 28 9.4	1 29.9	0.324 6398	6048	14 11.5
15	17 45 42.92	3 18.60	24 29 39.3	1 14.0	0.325 2446	5998	14 10.8
16	17 49 1.52	3 18.92	24 30 53.3	0 58.2	0.325 8444	5950	14 10.2
17	17 52 20.44	3 19.22	24 31 51.5	0 42.0	0.326 4394	5900	14 9.6
18	17 55 39.66	3 19.51	24 32 33.5	0 26.0	0.327 0294	5851	14 8.9
19	17 58 59.17	3 19.78	−24 32 59.5	0 9.8	0.327 6145	5802	14 8.3
20	18 2 18.95	3 20.03	24 33 9.3	0 6.5	0.328 1947	5752	14 7.7
21	18 5 38.98	3 20.25	24 33 2.8	0 22.7	0.328 7699	5706	14 7.1
22	18 8 59.23	3 20.47	24 32 40.1	0 39.0	0.329 3405	5658	14 6.5
23	18 12 19.70	3 20.65	24 32 1.1	0 55.3	0.329 9063	5613	14 5.9
24	18 15 40.35		−24 31 5.8		0.330 4676		14 5.3

Tag	0h Welt-Zeit: Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	m s	° ′ ″	′ ″			h m
Nov. 24	18 15 40.35	3 20.82	−24 31 5.8	1 11.7	0.330 4676	5569	14 5.3
25	18 19 1.17	3 20.97	24 29 54.1	1 28.2	0.331 0245	5527	14 4.7
26	18 22 22.14	3 21.11	24 28 25.9	1 44.6	0.331 5772	5485	14 4.2
27	18 25 43.25	3 21.21	24 26 41.3	2 1.1	0.332 1257	5445	14 3.6
28	18 29 4.46	3 21.32	24 24 40.2	2 17.5	0.332 6702	5406	14 3.0
29	18 32 25.78	3 21.39	24 22 22.7	2 34.0	0.333 2108	5368	14 2.4
30	18 35 47.17	3 21.47	−24 19 48.7	2 50.5	0.333 7476	5331	14 1.8
Dez. 1	18 39 8.64	3 21.51	24 16 58.2	3 6.9	0.334 2807	5295	14 1.2
2	18 42 30.15	3 21.55	24 13 51.3	3 23.5	0.334 8102	5260	14 0.6
3	18 45 51.70	3 21.56	24 10 27.8	3 39.9	0.335 3362	5226	14 0.0
4	18 49 13.26	3 21.56	24 6 47.9	3 56.3	0.335 8588	5192	13 59.5
5	18 52 34.82	3 21.55	24 2 51.6	4 12.9	0.336 3780	5160	13 58.9
6	18 55 56.37	3 21.53	−23 58 38.7	4 29.1	0.336 8940	5128	13 58.3
7	18 59 17.90	3 21.47	23 54 9.6	4 45.5	0.337 4068	5095	13 57.7
8	19 2 39.37	3 21.42	23 49 24.1	5 1.8	0.337 9163	5064	13 57.1
9	19 6 0.79	3 21.34	23 44 22.3	5 18.1	0.338 4227	5034	13 56.5
10	19 9 22.13	3 21.26	23 39 4.2	5 34.3	0.338 9261	5002	13 55.9
11	19 12 43.39	3 21.16	23 33 29.9	5 50.6	0.339 4263	4970	13 55.4
12	19 16 4.55	3 21.03	−23 27 39.3	6 6.6	0.339 9233	4940	13 54.8
13	19 19 25.58	3 20.90	23 21 32.7	6 22.7	0.340 4173	4908	13 54.2
14	19 22 46.48	3 20.76	23 15 10.0	6 38.8	0.340 9081	4877	13 53.6
15	19 26 7.24	3 20.58	23 8 31.2	6 54.6	0.341 3958	4845	13 53.0
16	19 29 27.82	3 20.41	23 1 36.6	7 10.4	0.341 8803	4814	13 52.4
17	19 32 48.23	3 20.21	22 54 26.2	7 26.1	0.342 3617	4782	13 51.8
18	19 36 8.44	3 20.00	−22 47 0.1	7 41.8	0.342 8399	4749	13 51.2
19	19 39 28.44	3 19.77	22 39 18.3	7 57.4	0.343 3148	4719	13 50.6
20	19 42 48.21	3 19.52	22 31 20.9	8 12.6	0.343 7867	4689	13 49.9
21	19 46 7.73	3 19.25	22 23 8.3	8 28.0	0.344 2556	4659	13 49.3
22	19 49 26.98	3 18.99	22 14 40.3	8 43.0	0.344 7215	4630	13 48.7
23	19 52 45.97	3 18.69	22 5 57.3	8 58.1	0.345 1845	4602	13 48.1
24	19 56 4.66	3 18.40	−21 56 59.2	9 13.1	0.345 6447	4575	13 47.4
25	19 59 23.06	3 18.08	21 47 46.1	9 27.7	0.346 1022	4550	13 46.8
26	20 2 41.14	3 17.76	21 38 18.4	9 42.4	0.346 5572	4524	13 46.2
27	20 5 58.90	3 17.43	21 28 36.0	9 56.9	0.347 0096	4500	13 45.5
28	20 9 16.33	3 17.09	21 18 39.1	10 11.2	0.347 4596	4478	13 44.9
29	20 12 33.42	3 16.75	21 8 27.9	10 25.3	0.347 9074	4457	13 44.2
30	20 15 50.17	3 16.38	−20 58 2.6	10 39.5	0.348 3531	4435	13 43.5
31	20 19 6.55	3 16.01	20 47 23.1	10 53.3	0.348 7966	4414	13 42.8
32	20 22 22.56		−20 36 29.8		0.349 2380		13 42.2

Jupiter 1933

Tag	0^h Welt-Zeit: Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
Jan. 0	11 36 52.40	5.80	+3 51 50.6	0 19.1	0.704 2374	1 3168	4 59.2
1	11 36 58.20	5.10	3 51 31.5	0 14.5	0.702 9206	1 3137	4 55.4
2	11 37 3.30	4.40	3 51 17.0	0 10.0	0.701 6069	1 3103	4 51.5
3	11 37 7.70	3.70	3 51 7.0	0 5.4	0.700 2966	1 3062	4 47.7
4	11 37 11.40	2.98	3 51 1.6	0 0.9	0.698 9904	1 3017	4 43.8
5	11 37 14.38	2.28	3 51 0.7	0 3.7	0.697 6887	1 2969	4 39.9
6	11 37 16.66	1.58	+3 51 4.4	0 8.3	0.696 3918	1 2914	4 36.0
7	11 37 18.24	0.86	3 51 12.7	0 12.8	0.695 1004	1 2856	4 32.1
8	11 37 19.10	0.16	3 51 25.5	0 17.4	0.693 8148	1 2793	4 28.2
9	11 37 19.26	0.55	3 51 42.9	0 21.9	0.692 5355	1 2726	4 24.3
10	11 37 18.71	1.26	3 52 4.8	0 26.5	0.691 2629	1 2653	4 20.3
11	11 37 17.45	1.96	3 52 31.3	0 30.9	0.689 9976	1 2574	4 16.4
12	11 37 15.49	2.68	+3 53 2.2	0 35.5	0.688 7402	1 2492	4 12.4
13	11 37 12.81	3.38	3 53 37.7	0 40.1	0.687 4910	1 2405	4 8.4
14	11 37 9.43	4.10	3 54 17.8	0 44.5	0.686 2505	1 2312	4 4.4
15	11 37 5.33	4.80	3 55 2.3	0 49.1	0.685 0193	1 2213	4 0.4
16	11 37 0.53	5.50	3 55 51.4	0 53.5	0.683 7980	1 2111	3 56.4
17	11 36 55.03	6.22	3 56 44.9	0 57.9	0.682 5869	1 2002	3 52.4
18	11 36 48.81	6.92	+3 57 42.8	1 2.5	0.681 3867	1 1887	3 48.4
19	11 36 41.89	7.62	3 58 45.3	1 6.9	0.680 1980	1 1769	3 44.3
20	11 36 34.27	8.32	3 59 52.2	1 11.3	0.679 0211	1 1642	3 40.3
21	11 36 25.95	9.01	4 1 3.5	1 15.7	0.677 8569	1 1512	3 36.2
22	11 36 16.94	9.71	4 2 19.2	1 20.1	0.676 7057	1 1375	3 32.1
23	11 36 7.23	10.39	4 3 39.3	1 24.3	0.675 5682	1 1232	3 28.0
24	11 35 56.84	11.09	+4 5 3.6	1 28.5	0.674 4450	1 1083	3 23.9
25	11 35 45.75	11.75	4 6 32.1	1 32.8	0.673 3367	1 0928	3 19.8
26	11 35 34.00	12.43	4 8 4.9	1 37.0	0.672 2439	1 0767	3 15.7
27	11 35 21.57	13.09	4 9 41.9	1 41.0	0.671 1672	1 0601	3 11.5
28	11 35 8.48	13.74	4 11 22.9	1 45.2	0.670 1071	1 0428	3 7.4
29	11 34 54.74	14.38	4 13 8.1	1 49.0	0.669 0643	1 0251	3 3.2
30	11 34 40.36	15.02	+4 14 57.1	1 53.0	0.668 0392	1 0068	2 59.0
31	11 34 25.34	15.65	4 16 50.1	1 56.8	0.667 0324	9879	2 54.9
Febr. 1	11 34 9.69	16.27	4 18 46.9	2 0.5	0.666 0445	9685	2 50.7
2	11 33 53.42	16.87	4 20 47.4	2 4.1	0.665 0760	9488	2 46.4
3	11 33 36.55	17.47	4 22 51.5	2 7.8	0.664 1272	9284	2 42.2
4	11 33 19.08	18.06	4 24 59.3	2 11.2	0.663 1988	9075	2 38.0
5	11 33 1.02	18.64	+4 27 10.5	2 14.6	0.662 2913	8861	2 33.8
6	11 32 42.38	19.20	4 29 25.1	2 18.0	0.661 4052	8642	2 29.5
7	11 32 23.18	19.74	4 31 43.1	2 21.3	0.660 5410	8419	2 25.3
8	11 32 3.44	20.29	4 34 4.4	2 24.4	0.659 6991	8192	2 21.0
9	11 31 43.15	20.82	4 36 28.8	2 27.4	0.658 8799	7960	2 16.8
10	11 31 22.33		+4 38 56.2		0.658 0839		2 12.5

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
Febr. 10	11 31 22.33	21.33	+4 38 56.2	2 30.5	0.658 0839	7723	2 12.5
11	11 31 1.00	21.83	4 41 26.7	2 33.3	0.657 3116	7484	2 8.2
12	11 30 39.17	22.32	4 44 0.0	2 36.1	0.656 5632	7238	2 3.9
13	11 30 16.85	22.79	4 46 36.1	2 38.9	0.655 8394	6989	1 59.6
14	11 29 54.06	23.25	4 49 15.0	2 41.4	0.655 1405	6734	1 55.3
15	11 29 30.81	23.71	4 51 56.4	2 44.0	0.654 4671	6475	1 51.0
16	11 29 7.10	24.13	+4 54 40.4	2 46.4	0.653 8196	6213	1 46.7
17	11 28 42.97	24.56	4 57 26.8	2 48.6	0.653 1983	5947	1 42.3
18	11 28 18.41	24.94	5 0 15.4	2 50.7	0.652 6036	5676	1 38.0
19	11 27 53.47	25.33	5 3 6.1	2 52.9	0.652 0360	5403	1 33.6
20	11 27 28.14	25.70	5 5 59.0	2 54.7	0.651 4957	5124	1 29.3
21	11 27 2.44	26.04	5 8 53.7	2 56.5	0.650 9833	4843	1 24.9
22	11 26 36.40	26.38	+5 11 50.2	2 58.2	0.650 4990	4558	1 20.6
23	11 26 10.02	26.68	5 14 48.4	2 59.7	0.650 0432	4268	1 16.2
24	11 25 43.34	26.97	5 17 48.1	3 1.1	0.649 6164	3977	1 11.8
25	11 25 16.37	27.24	5 20 49.2	3 2.5	0.649 2187	3684	1 7.4
26	11 24 49.13	27.48	5 23 51.7	3 3.5	0.648 8503	3387	1 3.1
27	11 24 21.65	27.71	5 26 55.2	3 4.5	0.648 5116	3089	0 58.7
28	11 23 53.94	27.93	+5 29 59.7	3 5.2	0.648 2027	2791	0 54.3
März 1	11 23 26.01	28.10	5 33 4.9	3 6.0	0.647 9236	2489	0 49.9
2	11 22 57.91	28.28	5 36 10.9	3 6.5	0.647 6747	2186	0 45.5
3	11 22 29.63	28.42	5 39 17.4	3 6.9	0.647 4561	1882	0 41.1
4	11 22 1.21	28.55	5 42 24.3	3 7.2	0.647 2679	1578	0 36.7
5	11 21 32.66	28.64	5 45 31.5	3 7.4	0.647 1101	1272	0 32.3
6	11 21 4.02	28.74	+5 48 38.9	3 7.4	0.646 9829	968	0 27.9
7	11 20 35.28	28.79	5 51 46.3	3 7.2	0.646 8861	662	0 23.5
8	11 20 6.49	28.83	5 54 53.5	3 7.0	0.646 8199	357	0 19.1
9	11 19 37.66	28.86	5 58 0.5	3 6.7	0.646 7842	52	0 14.7
10	11 19 8.80	28.85	6 1 7.2	3 6.1	0.646 7790	254	0 10.3
11	11 18 39.95	28.83	6 4 13.3	3 5.4	0.646 8044	558	0 5.9
12	11 18 11.12	28.80	+6 7 18.7	3 4.8	0.646 8602	861	{ 0 1.4 / 23 57.0 }
13	11 17 42.32	28.74	6 10 23.5	3 3.8	0.646 9463	1164	23 52.6
14	11 17 13.58	28.66	6 13 27.3	3 2.8	0.647 0627	1466	23 48.2
15	11 16 44.92	28.57	6 16 30.1	3 1.7	0.647 2093	1767	23 43.8
16	11 16 16.35	28.45	6 19 31.8	3 0.4	0.647 3860	2067	23 39.4
17	11 15 47.90	28.31	6 22 32.2	2 59.0	0.647 5927	2366	23 35.0
18	11 15 19.59	28.16	+6 25 31.2	2 57.6	0.647 8293	2663	23 30.6
19	11 14 51.43	27.98	6 28 28.8	2 55.9	0.648 0956	2959	23 26.2
20	11 14 23.45	27.79	6 31 24.7	2 54.2	0.648 3915	3253	23 21.8
21	11 13 55.66	27.56	6 34 18.9	2 52.3	0.648 7168	3546	23 17.4
22	11 13 28.10	27.32	6 37 11.2	2 50.3	0.649 0714	3835	23 13.0
23	11 13 0.78		+6 40 1.5		0.649 4549		23 8.7

Tag	0ʰ Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
März 23	11 13 0.78	27.07	+6 40 1.5	2 48.2	0.649 4549	4123	23 8.7
24	11 12 33.71	26.80	6 42 49.7	2 46.0	0.649 8672	4407	23 4.3
25	11 12 6.91	26.50	6 45 35.7	2 43.6	0.650 3079	4688	22 59.9
26	11 11 40.41	26.18	6 48 19.3	2 41.2	0.650 7767	4967	22 55.5
27	11 11 14.23	25.85	6 51 0.5	2 38.6	0.651 2734	5240	22 51.2
28	11 10 48.38	25.51	6 53 39.1	2 35.9	0.651 7974	5511	22 46.8
29	11 10 22.87	25.13	+6 56 15.0	2 33.1	0.652 3485	5778	22 42.5
30	11 9 57.74	24.75	6 58 48.1	2 30.3	0.652 9263	6040	22 38.1
31	11 9 32.99	24.34	7 1 18.4	2 27.2	0.653 5303	6299	22 33.8
April 1	11 9 8.65	23.92	7 3 45.6	2 24.2	0.654 1602	6553	22 29.5
2	11 8 44.73	23.49	7 6 9.8	2 21.1	0.654 8155	6802	22 25.1
3	11 8 21.24	23.04	7 8 30.9	2 17.8	0.655 4957	7048	22 20.8
4	11 7 58.20	22.58	+7 10 48.7	2 14.6	0.656 2005	7289	22 16.5
5	11 7 35.62	22.10	7 13 3.3	2 11.1	0.656 9294	7523	22 12.2
6	11 7 13.52	21.62	7 15 14.4	2 7.7	0.657 6817	7754	22 7.9
7	11 6 51.90	21.11	7 17 22.1	2 4.2	0.658 4571	7980	22 3.7
8	11 6 30.79	20.61	7 19 26.3	2 0.7	0.659 2551	8201	21 59.4
9	11 6 10.18	20.07	7 21 27.0	1 57.1	0.660 0752	8417	21 55.1
10	11 5 50.11	19.54	+7 23 24.1	1 53.3	0.660 9169	8628	21 50.8
11	11 5 30.57	19.00	7 25 17.4	1 49.7	0.661 7797	8835	21 46.6
12	11 5 11.57	18.45	7 27 7.1	1 45.9	0.662 6632	9036	21 42.4
13	11 4 53.12	17.88	7 28 53.0	1 42.0	0.663 5668	9234	21 38.1
14	11 4 35.24	17.30	7 30 35.0	1 38.2	0.664 4902	9426	21 33.9
15	11 4 17.94	16.73	7 32 13.2	1 34.3	0.665 4328	9614	21 29.7
16	11 4 1.21	16.13	+7 33 47.5	1 30.4	0.666 3942	9797	21 25.5
17	11 3 45.08	15.53	7 35 17.9	1 26.4	0.667 3739	9976	21 21.3
18	11 3 29.55	14.92	7 36 44.3	1 22.3	0.668 3715	1 0149	21 17.1
19	11 3 14.63	14.30	7 38 6.6	1 18.2	0.669 3864	1 0316	21 13.0
20	11 3 0.33	13.68	7 39 24.8	1 14.0	0.670 4180	1 0478	21 8.8
21	11 2 46.65	13.04	7 40 38.8	1 9.9	0.671 4658	1 0636	21 4.7
22	11 2 33.61	12.40	+7 41 48.7	1 5.7	0.672 5294	1 0789	21 0.5
23	11 2 21.21	11.74	7 42 54.4	1 1.5	0.673 6083	1 0934	20 56.4
24	11 2 9.47	11.10	7 43 55.9	0 57.2	0.674 7017	1 1076	20 52.3
25	11 1 58.37	10.43	7 44 53.1	0 52.9	0.675 8093	1 1211	20 48.2
26	11 1 47.94	9.77	7 45 46.0	0 48.7	0.676 9304	1 1341	20 44.1
27	11 1 38.17	9.11	7 46 34.7	0 44.3	0.678 0645	1 1467	20 40.0
28	11 1 29.06	8.43	+7 47 19.0	0 40.1	0.679 2112	1 1585	20 35.9
29	11 1 20.63	7.76	7 47 59.1	0 35.7	0.680 3697	1 1700	20 31.9
30	11 1 12.87	7.08	7 48 34.8	0 31.3	0.681 5397	1 1808	20 27.8
Mai 1	11 1 5.79	6.40	7 49 6.1	0 27.1	0.682 7205	1 1911	20 23.8
2	11 0 59.39	5.72	7 49 33.2	0 22.7	0.683 9116	1 2008	20 19.7
3	11 0 53.67		+7 49 55.9		0.685 1124		20 15.7

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
Mai 3	11 0 53.67	5.05	+7 49 55.9	0 18.3	0.685 1124	1 2101	20 15.7
4	11 0 48.62	4.36	7 50 14.2	0 14.1	0.686 3225	1 2187	20 11.7
5	11 0 44.26	3.66	7 50 28.3	0 9.7	0.687 5412	1 2270	20 7.7
6	11 0 40.60	3.00	7 50 38.0	0 5.5	0.688 7682	1 2349	20 3.7
7	11 0 37.60	2.32	7 50 43.5	0 1.1	0.690 0031	1 2422	19 59.8
8	11 0 35.28	1.63	7 50 44.6	0 3.1	0.691 2453	1 2490	19 55.8
9	11 0 33.65	0.95	+7 50 41.5	0 7.3	0.692 4943	1 2554	19 51.9
10	11 0 32.70	0.28	7 50 34.2	0 11.6	0.693 7497	1 2613	19 47.9
11	11 0 32.42	0.40	7 50 22.6	0 15.8	0.695 0110	1 2668	19 44.0
12	11 0 32.82	1.07	7 50 6.8	0 20.1	0.696 2778	1 2719	19 40.1
13	11 0 33.89	1.75	7 49 46.7	0 24.3	0.697 5497	1 2766	19 36.2
14	11 0 35.64	2.42	7 49 22.4	0 28.4	0.698 8263	1 2811	19 32.3
15	11 0 38.06	3.09	+7 48 54.0	0 32.6	0.700 1074	1 2850	19 28.4
16	11 0 41.15	3.75	7 48 21.4	0 36.8	0.701 3924	1 2885	19 24.5
17	11 0 44.90	4.43	7 47 44.6	0 41.0	0.702 6809	1 2916	19 20.7
18	11 0 49.33	5.09	7 47 3.6	0 45.0	0.703 9725	1 2942	19 16.8
19	11 0 54.42	5.75	7 46 18.6	0 49.2	0.705 2667	1 2965	19 13.0
20	11 1 0.17	6.42	7 45 29.4	0 53.3	0.706 5632	1 2983	19 9.1
21	11 1 6.59	7.07	+7 44 36.1	0 57.4	0.707 8615	1 2997	19 5.3
22	11 1 13.66	7.72	7 43 38.7	1 1.4	0.709 1612	1 3008	19 1.5
23	11 1 21.38	8.39	7 42 37.3	1 5.5	0.710 4620	1 3015	18 57.7
24	11 1 29.77	9.02	7 41 31.8	1 9.5	0.711 7635	1 3017	18 53.9
25	11 1 38.79	9.67	7 40 22.3	1 13.5	0.713 0652	1 3016	18 50.2
26	11 1 48.46	10.31	7 39 8.8	1 17.6	0.714 3668	1 3010	18 46.4
27	11 1 58.77	10.96	+7 37 51.2	1 21.4	0.715 6678	1 3001	18 42.7
28	11 2 9.73	11.58	7 36 29.8	1 25.3	0.716 9679	1 2989	18 38.9
29	11 2 21.31	12.20	7 35 4.5	1 29.2	0.718 2668	1 2972	18 35.2
30	11 2 33.51	12.83	7 33 35.3	1 33.0	0.719 5640	1 2952	18 31.5
31	11 2 46.34	13.43	7 32 2.3	1 36.8	0.720 8592	1 2930	18 27.8
Juni 1	11 2 59.77	14.05	7 30 25.5	1 40.5	0.722 1522	1 2903	18 24.1
2	11 3 13.82	14.65	+7 28 45.0	1 44.3	0.723 4425	1 2873	18 20.4
3	11 3 28.47	15.25	7 27 0.7	1 48.0	0.724 7298	1 2841	18 16.7
4	11 3 43.72	15.83	7 25 12.7	1 51.6	0.726 0139	1 2806	18 13.0
5	11 3 59.55	16.42	7 23 21.1	1 55.2	0.727 2945	1 2768	18 9.3
6	11 4 15.97	17.00	7 21 25.9	1 58.9	0.728 5713	1 2728	18 5.7
7	11 4 32.97	17.57	7 19 27.0	2 2.3	0.729 8441	1 2685	18 2.0
8	11 4 50.54	18.14	+7 17 24.7	2 5.8	0.731 1126	1 2640	17 58.4
9	11 5 8.68	18.70	7 15 18.9	2 9.3	0.732 3766	1 2592	17 54.8
10	11 5 27.38	19.25	7 13 9.6	2 12.7	0.733 6358	1 2543	17 51.2
11	11 5 46.63	19.80	7 10 56.9	2 16.1	0.734 8901	1 2490	17 47.6
12	11 6 6.43	20.34	7 8 40.8	2 19.6	0.736 1391	1 2436	17 44.0
13	11 6 26.77		+7 6 21.2		0.737 3827		17 40.4

Tag	0h Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	s	° ′ ″	′ ″			h m
Juni 13	11 6 26.77	20.89	+7 6 21.2	2 22.9	0.737 3827	1 2379	17 40.4
14	11 6 47.66	21.43	7 3 58.3	2 26.1	0.738 6206	1 2321	17 36.8
15	11 7 9.09	21.94	7 1 32.1	2 29.6	0.739 8527	1 2259	17 33.2
16	11 7 31.03	22.48	6 59 2.5	2 32.8	0.741 0786	1 2196	17 29.7
17	11 7 53.51	23.01	6 56 29.7	2 36.0	0.742 2982	1 2131	17 26.1
18	11 8 16.52	23.51	6 53 53.7	2 39.2	0.743 5113	1 2062	17 22.6
19	11 8 40.03	24.02	+6 51 14.5	2 42.5	0.744 7175	1 1992	17 19.0
20	11 9 4.05	24.52	6 48 32.0	2 45.6	0.745 9167	1 1919	17 15.5
21	11 9 28.57	25.02	6 45 46.4	2 48.6	0.747 1086	1 1845	17 12.0
22	11 9 53.59	25.51	6 42 57.8	2 51.8	0.748 2931	1 1767	17 8.5
23	11 10 19.10	26.00	6 40 6.0	2 54.8	0.749 4698	1 1688	17 5.0
24	11 10 45.10	26.48	6 37 11.2	2 57.8	0.750 6386	1 1607	17 1.5
25	11 11 11.58	26.94	+6 34 13.4	3 0.7	0.751 7993	1 1525	16 58.0
26	11 11 38.52	27.41	6 31 12.7	3 3.7	0.752 9518	1 1439	16 54.5
27	11 12 5.93	27.87	6 28 9.0	3 6.6	0.754 0957	1 1353	16 51.0
28	11 12 33.80	28.32	6 25 2.4	3 9.5	0.755 2310	1 1264	16 47.6
29	11 13 2.12	28.77	6 21 52.9	3 12.3	0.756 3574	1 1173	16 44.1
30	11 13 30.89	29.21	6 18 40.6	3 14.9	0.757 4747	1 1081	16 40.7
Juli 1	11 14 0.10	29.63	+6 15 25.7	3 17.7	0.758 5828	1 0988	16 37.2
2	11 14 29.73	30.06	6 12 8.0	3 20.4	0.759 6816	1 0894	16 33.8
3	11 14 59.79	30.48	6 8 47.6	3 23.1	0.760 7710	1 0798	16 30.4
4	11 15 30.27	30.90	6 5 24.5	3 25.6	0.761 8508	1 0701	16 26.9
5	11 16 1.17	31.30	6 1 58.9	3 28.2	0.762 9209	1 0603	16 23.5
6	11 16 32.47	31.70	5 58 30.7	3 30.8	0.763 9812	1 0505	16 20.1
7	11 17 4.17	32.09	+5 54 59.9	3 33.2	0.765 0317	1 0405	16 16.7
8	11 17 36.26	32.48	5 51 26.7	3 35.8	0.766 0722	1 0303	16 13.3
9	11 18 8.74	32.86	5 47 50.9	3 38.2	0.767 1025	1 0201	16 9.9
10	11 18 41.60	33.25	5 44 12.7	3 40.6	0.768 1226	1 0098	16 6.5
11	11 19 14.85	33.62	5 40 32.1	3 43.0	0.769 1324	9994	16 3.2
12	11 19 48.47	33.99	5 36 49.1	3 45.3	0.770 1318	9888	15 59.8
13	11 20 22.46	34.35	+5 33 3.8	3 47.7	0.771 1206	9783	15 56.4
14	11 20 56.81	34.72	5 29 16.1	3 50.0	0.772 0989	9676	15 53.1
15	11 21 31.53	35.07	5 25 26.1	3 52.2	0.773 0665	9567	15 49.7
16	11 22 6.60	35.41	5 21 33.9	3 54.4	0.774 0232	9456	15 46.4
17	11 22 42.01	35.75	5 17 39.5	3 56.7	0.774 9688	9346	15 43.1
18	11 23 17.76	36.10	5 13 42.8	3 58.9	0.775 9034	9233	15 39.7
19	11 23 53.86	36.43	+5 9 43.9	4 1.1	0.776 8267	9119	15 36.4
20	11 24 30.29	36.76	5 5 42.8	4 3.1	0.777 7386	9005	15 33.0
21	11 25 7.05	37.08	5 1 39.7	4 5.3	0.778 6391	8891	15 29.7
22	11 25 44.13	37.40	4 57 34.4	4 7.3	0.779 5282	8773	15 26.4
23	11 26 21.53	37.70	4 53 27.1	4 9.3	0.780 4055	8656	15 23.1
24	11 26 59.23		+4 49 17.8		0.781 2711		15 19.8

Tag	0ʰ Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
Juli 24	11 26 59.23	38.01	+4 49 17.8	4 11.2	0.781 2711	8536	15 19.8
25	11 27 37.24	38.31	4 45 6.6	4 13.1	0.782 1247	8418	15 16.5
26	11 28 15.55	38.61	4 40 53.5	4 15.1	0.782 9665	8296	15 13.2
27	11 28 54.16	38.89	4 36 38.4	4 16.9	0.783 7961	8174	15 9.9
28	11 29 33.05	39.17	4 32 21.5	4 18.7	0.784 6135	8053	15 6.7
29	11 30 12.22	39.45	4 28 2.8	4 20.5	0.785 4188	7931	15 3.4
30	11 30 51.67	39.72	+4 23 42.3	4 22.2	0.786 2119	7807	15 0.1
31	11 31 31.39	39.98	4 19 20.1	4 23.9	0.786 9926	7684	14 56.8
Aug. 1	11 32 11.37	40.24	4 14 56.2	4 25.6	0.787 7610	7560	14 53.5
2	11 32 51.61	40.50	4 10 30.6	4 27.2	0.788 5170	7437	14 50.3
3	11 33 32.11	40.74	4 6 3.4	4 28.8	0.789 2607	7311	14 47.0
4	11 34 12.85	40.98	4 1 34.6	4 30.4	0.789 9918	7186	14 43.8
5	11 34 53.83	41.24	+3 57 4.2	4 32.0	0.790 7104	7061	14 40.5
6	11 35 35.07	41.46	3 52 32.2	4 33.4	0.791 4165	6935	14 37.3
7	11 36 16.53	41.70	3 47 58.8	4 35.0	0.792 1100	6808	14 34.1
8	11 36 58.23	41.92	3 43 23.8	4 36.4	0.792 7908	6682	14 30.8
9	11 37 40.15	42.14	3 38 47.4	4 37.8	0.793 4590	6556	14 27.6
10	11 38 22.29	42.37	3 34 9.6	4 39.3	0.794 1146	6427	14 24.4
11	11 39 4.66	42.57	+3 29 30.3	4 40.6	0.794 7573	6298	14 21.1
12	11 39 47.23	42.79	3 24 49.7	4 41.9	0.795 3871	6169	14 17.9
13	11 40 30.02	42.99	3 20 7.8	4 43.3	0.796 0040	6039	14 14.7
14	11 41 13.01	43.20	3 15 24.5	4 44.5	0.796 6079	5909	14 11.5
15	11 41 56.21	43.41	3 10 40.0	4 45.8	0.797 1988	5779	14 8.2
16	11 42 39.62	43.59	3 5 54.2	4 47.1	0.797 7767	5647	14 5.0
17	11 43 23.21	43.77	+3 1 7.1	4 48.3	0.798 3414	5514	14 1.8
18	11 44 6.98	43.96	2 56 18.8	4 49.4	0.798 8928	5381	13 58.6
19	11 44 50.94	44.14	2 51 29.4	4 50.5	0.799 4309	5248	13 55.4
20	11 45 35.08	44.32	2 46 38.9	4 51.7	0.799 9557	5113	13 52.2
21	11 46 19.40	44.48	2 41 47.2	4 52.7	0.800 4670	4978	13 49.0
22	11 47 3.88	44.65	2 36 54.5	4 53.7	0.800 9648	4844	13 45.8
23	11 47 48.53	44.82	+2 32 0.8	4 54.7	0.801 4492	4708	13 42.6
24	11 48 33.35	44.96	2 27 6.1	4 55.6	0.801 9200	4572	13 39.5
25	11 49 18.31	45.12	2 22 10.5	4 56.6	0.802 3772	4435	13 36.3
26	11 50 3.43	45.26	2 17 13.9	4 57.4	0.802 8207	4298	13 33.1
27	11 50 48.69	45.39	2 12 16.5	4 58.2	0.803 2505	4162	13 29.9
28	11 51 34.08	45.53	2 7 18.3	4 59.1	0.803 6667	4024	13 26.7
29	11 52 19.61	45.66	+2 2 19.2	4 59.8	0.804 0691	3888	13 23.6
30	11 53 5.27	45.79	1 57 19.4	5 0.6	0.804 4579	3751	13 20.4
31	11 53 51.06	45.91	1 52 18.8	5 1.2	0.804 8330	3614	13 17.2
Sept. 1	11 54 36.97	46.03	1 47 17.6	5 1.8	0.805 1944	3476	13 14.0
2	11 55 23.00	46.13	1 42 15.8	5 2.5	0.805 5420	3338	13 10.9
3	11 56 9.13		+1 37 13.3		0.805 8758		13 7.7

Jupiter 1933

Tag		0ʰ Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933		h m s	s	° ′ ″	′ ″			h m
Sept.	3	11 56 9.13	46.25	+1 37 13.3	5 3.2	0.805 8758	3202	13 7.7
	4	11 56 55.38	46.35	1 32 10.1	5 3.7	0.806 1960	3064	13 4.5
	5	11 57 41.73	46.46	1 27 6.4	5 4.3	0.806 5024	2927	13 1.4
	6	11 58 28.19	46.56	1 22 2.1	5 4.9	0.806 7951	2789	12 58.2
	7	11 59 14.75	46.65	1 16 57.2	5 5.3	0.807 0740	2651	12 55.1
	8	12 0 1.40	46.74	1 11 51.9	5 5.9	0.807 3391	2512	12 51.9
	9	12 0 48.14	46.84	+1 6 46.0	5 6.3	0.807 5903	2373	12 48.7
	10	12 1 34.98	46.92	1 1 39.7	5 6.7	0.807 8276	2233	12 45.6
	11	12 2 21.90	47.00	0 56 33.0	5 7.1	0.808 0509	2094	12 42.4
	12	12 3 8.90	47.08	0 51 25.9	5 7.5	0.808 2603	1953	12 39.3
	13	12 3 55.98	47.14	0 46 18.4	5 7.7	0.808 4556	1812	12 36.1
	14	12 4 43.12	47.22	0 41 10.7	5 8.1	0.808 6368	1671	12 33.0
	15	12 5 30.34	47.28	+0 36 2.6	5 8.3	0.808 8039	1529	12 29.8
	16	12 6 17.62	47.33	0 30 54.3	5 8.6	0.808 9568	1388	12 26.7
	17	12 7 4.95	47.39	0 25 45.7	5 8.8	0.809 0956	1246	12 23.6
	18	12 7 52.34	47.44	0 20 36.9	5 8.9	0.809 2202	1103	12 20.4
	19	12 8 39.78	47.49	0 15 28.0	5 9.0	0.809 3305	960	12 17.3
	20	12 9 27.27	47.53	0 10 19.0	5 9.0	0.809 4265	816	12 14.1
	21	12 10 14.80	47.56	+0 5 10.0	5 9.1	0.809 5081	672	12 11.0
	22	12 11 2.36	47.59	+0 0 0.9	5 9.2	0.809 5753	530	12 7.8
	23	12 11 49.95	47.61	−0 5 8.3	5 9.0	0.809 6283	386	12 4.7
	24	12 12 37.56	47.64	0 10 17.3	5 9.0	0.809 6669	243	12 1.6
	25	12 13 25.20	47.66	0 15 26.3	5 8.9	0.809 6912	100	11 58.4
	26	12 14 12.86	47.66	0 20 35.2	5 8.7	0.809 7012	44	11 55.3
	27	12 15 0.52	47.68	−0 25 43.9	5 8.6	0.809 6968	186	11 52.1
	28	12 15 48.20	47.68	0 30 52.5	5 8.3	0.809 6782	330	11 49.0
	29	12 16 35.88	47.67	0 36 0.8	5 8.1	0.809 6452	472	11 45.8
	30	12 17 23.55	47.67	0 41 8.9	5 7.9	0.809 5980	615	11 42.7
Okt.	1	12 18 11.22	47.66	0 46 16.8	5 7.5	0.809 5365	757	11 39.6
	2	12 18 58.88	47.65	0 51 24.3	5 7.3	0.809 4608	900	11 36.4
	3	12 19 46.53	47.63	−0 56 31.6	5 6.9	0.809 3708	1042	11 33.3
	4	12 20 34.16	47.61	1 1 38.5	5 6.6	0.809 2666	1185	11 30.1
	5	12 21 21.77	47.59	1 6 45.1	5 6.0	0.809 1481	1328	11 27.0
	6	12 22 9.36	47.57	1 11 51.1	5 5.6	0.809 0153	1472	11 23.9
	7	12 22 56.93	47.53	1 16 56.7	5 5.2	0.808 8681	1616	11 20.7
	8	12 23 44.46	47.49	1 22 1.9	5 4.6	0.808 7065	1758	11 17.6
	9	12 24 31.95	47.46	−1 27 6.5	5 4.1	0.808 5307	1901	11 14.4
	10	12 25 19.41	47.41	1 32 10.6	5 3.6	0.808 3406	2046	11 11.3
	11	12 26 6.82	47.37	1 37 14.2	5 2.9	0.808 1360	2190	11 8.1
	12	12 26 54.19	47.30	1 42 17.1	5 2.4	0.807 9170	2334	11 5.0
	13	12 27 41.49	47.26	1 47 19.5	5 1.6	0.807 6836	2479	11 1.9
	14	12 28 28.75		−1 52 21.1		0.807 4357		10 58.7

Tag	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
	0h Welt-Zeit						
1933	h m s	s	° ′ ″	′ ″			h m
Okt. 14	12 28 28.75	47.19	−1 52 21.1	5 0.9	0.807 4357	2624	10 58.7
15	12 29 15.94	47.12	1 57 22.0	5 0.2	0.807 1733	2768	10 55.6
16	12 30 3.06	47.04	2 2 22.2	4 59.4	0.806 8965	2914	10 52.4
17	12 30 50.10	46.98	2 7 21.6	4 58.6	0.806 6051	3058	10 49.2
18	12 31 37.08	46.89	2 12 20.2	4 57.7	0.806 2993	3203	10 46.1
19	12 32 23.97	46.80	2 17 17.9	4 56.8	0.805 9790	3348	10 42.9
20	12 33 10.77	46.70	−2 22 14.7	4 55.8	0.805 6442	3494	10 39.7
21	12 33 57.47	46.60	2 27 10.5	4 54.8	0.805 2948	3638	10 36.6
22	12 34 44.07	46.49	2 32 5.3	4 53.9	0.804 9310	3783	10 33.4
23	12 35 30.56	46.39	2 36 59.2	4 52.7	0.804 5527	3926	10 30.3
24	12 36 16.95	46.27	2 41 51.9	4 51.7	0.804 1601	4069	10 27.1
25	12 37 3.22	46.15	2 46 43.6	4 50.5	0.803 7532	4212	10 24.0
26	12 37 49.37	46.03	−2 51 34.1	4 49.3	0.803 3320	4354	10 20.8
27	12 38 35.40	45.89	2 56 23.4	4 48.3	0.802 8966	4497	10 17.6
28	12 39 21.29	45.75	3 1 11.7	4 46.9	0.802 4469	4638	10 14.4
29	12 40 7.04	45.62	3 5 58.6	4 45.7	0.801 9831	4781	10 11.3
30	12 40 52.66	45.47	3 10 44.3	4 44.5	0.801 5050	4921	10 8.1
31	12 41 38.13	45.32	3 15 28.8	4 43.1	0.801 0129	5062	10 4.9
Nov. 1	12 42 23.45	45.16	−3 20 11.9	4 41.7	0.800 5067	5203	10 1.7
2	12 43 8.61	45.02	3 24 53.6	4 40.4	0.799 9864	5344	9 58.5
3	12 43 53.63	44.85	3 29 34.0	4 39.0	0.799 4520	5484	9 55.4
4	12 44 38.48	44.68	3 34 13.0	4 37.5	0.798 9036	5625	9 52.2
5	12 45 23.16	44.51	3 38 50.5	4 36.0	0.798 3411	5765	9 49.0
6	12 46 7.67	44.33	3 43 26.5	4 34.5	0.797 7646	5905	9 45.8
7	12 46 52.00	44.15	−3 48 1.0	4 33.0	0.797 1741	6045	9 42.6
8	12 47 36.15	43.95	3 52 34.0	4 31.4	0.796 5696	6185	9 39.4
9	12 48 20.10	43.77	3 57 5.4	4 29.8	0.795 9511	6325	9 36.2
10	12 49 3.87	43.56	4 1 35.2	4 28.2	0.795 3186	6464	9 33.0
11	12 49 47.43	43.36	4 6 3.4	4 26.4	0.794 6722	6603	9 29.8
12	12 50 30.79	43.14	4 10 29.8	4 24.6	0.794 0119	6741	9 26.5
13	12 51 13.93	42.93	−4 14 54.4	4 22.9	0.793 3378	6881	9 23.3
14	12 51 56.86	42.70	4 19 17.3	4 21.1	0.792 6497	7019	9 20.1
15	12 52 39.56	42.48	4 23 38.4	4 19.3	0.791 9478	7156	9 16.9
16	12 53 22.04	42.23	4 27 57.7	4 17.3	0.791 2322	7294	9 13.7
17	12 54 4.27	41.98	4 32 15.0	4 15.4	0.790 5028	7430	9 10.4
18	12 54 46.25	41.74	4 36 30.4	4 13.5	0.789 7598	7566	9 7.2
19	12 55 27.99	41.48	−4 40 43.9	4 11.3	0.789 0032	7700	9 4.0
20	12 56 9.47	41.21	4 44 55.2	4 9.3	0.788 2332	7835	9 0.7
21	12 56 50.68	40.94	4 49 4.5	4 7.3	0.787 4497	7967	8 57.4
22	12 57 31.62	40.67	4 53 11.8	4 5.1	0.786 6530	8101	8 54.2
23	12 58 12.29	40.38	4 57 16.9	4 2.9	0.785 8429	8231	8 50.9
24	12 58 52.67		−5 1 19.8		0.785 0198		8 47.7

Tag	0h Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	s	° ′ ″	′ ″			h m
Nov. 24	12 58 52.67	40.09	−5 1 19.8	4 0.7	0.785 0198	8361	8 47.7
25	12 59 32.76	39.79	5 5 20.5	3 58.5	0.784 1837	8490	8 44.4
26	13 0 12.55	39.50	5 9 19.0	3 56.2	0.783 3347	8619	8 41.1
27	13 0 52.05	39.19	5 13 15.2	3 54.0	0.782 4728	8746	8 37.9
28	13 1 31.24	38.88	5 17 9.2	3 51.6	0.781 5982	8872	8 34.6
29	13 2 10.12	38.56	5 21 0.8	3 49.2	0.780 7110	8999	8 31.3
30	13 2 48.68	38.24	−5 24 50.0	3 47.0	0.779 8111	9123	8 28.0
Dez. 1	13 3 26.92	37.91	5 28 37.0	3 44.4	0.778 8988	9247	8 24.7
2	13 4 4.83	37.57	5 32 21.4	3 42.0	0.777 9741	9371	8 21.4
3	13 4 42.40	37.24	5 36 3.4	3 39.6	0.777 0370	9493	8 18.1
4	13 5 19.64	36.89	5 39 43.0	3 37.0	0.776 0877	9614	8 14.8
5	13 5 56.53	36.53	5 43 20.0	3 34.5	0.775 1263	9734	8 11.4
6	13 6 33.06	36.17	−5 46 54.5	3 31.8	0.774 1529	9855	8 8.1
7	13 7 9.23	35.80	5 50 26.3	3 29.1	0.773 1674	9974	8 4.8
8	13 7 45.03	35.42	5 53 55.4	3 26.5	0.772 1700	1 0091	8 1.4
9	13 8 20.45	35.04	5 57 21.9	3 23.8	0.771 1609	1 0209	7 58.1
10	13 8 55.49	34.66	6 0 45.7	3 21.1	0.770 1400	1 0324	7 54.7
11	13 9 30.15	34.25	6 4 6.8	3 18.3	0.769 1076	1 0438	7 51.4
12	13 10 4.40	33.85	−6 7 25.1	3 15.5	0.768 0638	1 0550	7 48.0
13	13 10 38.25	33.44	6 10 40.6	3 12.6	0.767 0088	1 0663	7 44.6
14	13 11 11.69	33.01	6 13 53.2	3 9.7	0.765 9425	1 0773	7 41.2
15	13 11 44.70	32.59	6 17 2.9	3 6.7	0.764 8652	1 0882	7 37.9
16	13 12 17.29	32.15	6 20 9.6	3 3.7	0.763 7770	1 0988	7 34.5
17	13 12 49.44	31.72	6 23 13.3	3 0.7	0.762 6782	1 1094	7 31.1
18	13 13 21.16	31.26	−6 26 14.0	2 57.6	0.761 5688	1 1197	7 27.7
19	13 13 52.42	30.80	6 29 11.6	2 54.6	0.760 4491	1 1298	7 24.2
20	13 14 23.22	30.34	6 32 6.2	2 51.4	0.759 3193	1 1396	7 20.8
21	13 14 53.56	29.86	6 34 57.6	2 48.2	0.758 1797	1 1494	7 17.4
22	13 15 23.42	29.40	6 37 45.8	2 45.0	0.757 0303	1 1588	7 14.0
23	13 15 52.82	28.90	6 40 30.8	2 41.8	0.755 8715	1 1681	7 10.5
24	13 16 21.72	28.42	−6 43 12.6	2 38.6	0.754 7034	1 1772	7 7.0
25	13 16 50.14	27.92	6 45 51.2	2 35.2	0.753 5262	1 1860	7 3.6
26	13 17 18.06	27.41	6 48 26.4	2 32.0	0.752 3402	1 1946	7 0.1
27	13 17 45.47	26.91	6 50 58.4	2 28.6	0.751 1456	1 2031	6 56.6
28	13 18 12.38	26.39	6 53 27.0	2 25.2	0.749 9425	1 2113	6 53.1
29	13 18 38.77	25.87	6 55 52.2	2 21.9	0.748 7312	1 2194	6 49.6
30	13 19 4.64	25.34	−6 58 14.1	2 18.5	0.747 5118	1 2271	6 46.1
31	13 19 29.98	24.80	7 0 32.6	2 15.0	0.746 2847	1 2348	6 42.6
32	13 19 54.78		−7 2 47.6		0.745 0499		6 39.1

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
Jan. 0	20 25 30.49	27.91	−19 47 23.8	1 32.7	1.034 7250	2731	13 46.7
1	20 25 58.40	28.03	19 45 51.1	1 33.4	1.034 9981	2633	13 43.2
2	20 26 26.43	28.15	19 44 17.7	1 34.0	1.035 2614	2533	13 39.8
3	20 26 54.58	28.25	19 42 43.7	1 34.6	1.035 5147	2435	13 36.3
4	20 27 22.83	28.35	19 41 9.1	1 35.2	1.035 7582	2334	13 32.8
5	20 27 51.18	28.46	19 39 33.9	1 35.9	1.035 9916	2235	13 29.4
6	20 28 19.64	28.55	−19 37 58.0	1 36.5	1.036 2151	2135	13 25.9
7	20 28 48.19	28.64	19 36 21.5	1 37.0	1.036 4286	2035	13 22.4
8	20 29 16.83	28.72	19 34 44.5	1 37.5	1.036 6321	1934	13 19.0
9	20 29 45.55	28.80	19 33 7.0	1 38.1	1.036 8255	1833	13 15.5
10	20 30 14.35	28.88	19 31 28.9	1 38.7	1.037 0088	1732	13 12.1
11	20 30 43.23	28.94	19 29 50.2	1 39.1	1.037 1820	1631	13 8.6
12	20 31 12.17	29.00	−19 28 11.1	1 39.7	1.037 3451	1530	13 5.2
13	20 31 41.17	29.07	19 26 31.4	1 40.1	1.037 4981	1429	13 1.7
14	20 32 10.24	29.13	19 24 51.3	1 40.7	1.037 6410	1327	12 58.3
15	20 32 39.37	29.18	19 23 10.6	1 41.1	1.037 7737	1224	12 54.8
16	20 33 8.55	29.23	19 21 29.5	1 41.5	1.037 8961	1122	12 51.4
17	20 33 37.78	29.27	19 19 48.0	1 42.0	1.038 0083	1020	12 47.9
18	20 34 7.05	29.31	−19 18 6.0	1 42.4	1.038 1103	918	12 44.5
19	20 34 36.36	29.35	19 16 23.6	1 42.9	1.038 2021	814	12 41.0
20	20 35 5.71	29.37	19 14 40.7	1 43.1	1.038 2835	711	12 37.6
21	20 35 35.08	29.39	19 12 57.6	1 43.5	1.038 3546	607	12 34.2
22	20 36 4.47	29.42	19 11 14.1	1 43.9	1.038 4153	503	12 30.7
23	20 36 33.89	29.42	19 9 30.2	1 44.2	1.038 4656	399	12 27.3
24	20 37 3.31	29.44	−19 7 46.0	1 44.5	1.038 5055	295	12 23.8
25	20 37 32.75	29.44	19 6 1.5	1 44.8	1.038 5350	191	12 20.4
26	20 38 2.19	29.44	19 4 16.7	1 45.1	1.038 5541	87	12 16.9
27	20 38 31.63	29.44	19 2 31.6	1 45.3	1.038 5628	16	12 13.5
28	20 39 1.07	29.42	19 0 46.3	1 45.6	1.038 5612	122	12 10.1
29	20 39 30.49	29.41	18 59 0.7	1 45.8	1.038 5490	226	12 6.6
30	20 39 59.90	29.38	−18 57 14.9	1 45.9	1.038 5264	329	12 3.2
31	20 40 29.28	29.35	18 55 29.0	1 46.2	1.038 4935	433	11 59.7
Febr. 1	20 40 58.63	29.33	18 53 42.8	1 46.3	1.038 4502	536	11 56.3
2	20 41 27.96	29.29	18 51 56.5	1 46.4	1.038 3966	640	11 52.8
3	20 41 57.25	29.25	18 50 10.1	1 46.5	1.038 3326	742	11 49.4
4	20 42 26.50	29.20	18 48 23.6	1 46.6	1.038 2584	845	11 45.9
5	20 42 55.70	29.15	−18 46 37.0	1 46.6	1.038 1739	947	11 42.5
6	20 43 24.85	29.09	18 44 50.4	1 46.7	1.038 0792	1049	11 39.0
7	20 43 53.94	29.04	18 43 3.7	1 46.7	1.037 9743	1151	11 35.6
8	20 44 22.98	28.97	18 41 17.0	1 46.7	1.037 8592	1253	11 32.1
9	20 44 51.95	28.90	18 39 30.3	1 46.8	1.037 7339	1353	11 28.7
10	20 45 20.85		−18 37 43.5		1.037 5986		11 25.2

Tag		0h Welt-Zeit Scheinbare Rektaszension	Diff.	Scheinbare Deklination	Diff.	log Δ	Diff.	Obere Kulmination in Greenwich
1933		h m s	s	° ′ ″	′ ″			h m
Febr.	10	20 45 20.85	28.84	−18 37 43.5	1 46.8	1.037 5986	1455	11 25.2
	11	20 45 49.69	28.76	18 35 56.7	1 46.7	1.037 4531	1555	11 21.8
	12	20 46 18.45	28.69	18 34 10.0	1 46.6	1.037 2976	1656	11 18.3
	13	20 46 47.14	28.60	18 32 23.4	1 46.6	1.037 1320	1757	11 14.9
	14	20 47 15.74	28.51	18 30 36.8	1 46.4	1.036 9563	1857	11 11.4
	15	20 47 44.25	28.42	18 28 50.4	1 46.3	1.036 7706	1957	11 7.9
	16	20 48 12.67	28.32	−18 27 4.1	1 46.2	1.036 5749	2057	11 4.5
	17	20 48 40.99	28.21	18 25 17.9	1 46.0	1.036 3692	2155	11 1.0
	18	20 49 9.20	28.11	18 23 31.9	1 45.9	1.036 1537	2255	10 57.5
	19	20 49 37.31	28.00	18 21 46.0	1 45.6	1.035 9282	2354	10 54.1
	20	20 50 5.31	27.89	18 20 0.4	1 45.4	1.035 6928	2453	10 50.6
	21	20 50 33.20	27.77	18 18 15.0	1 45.2	1.035 4475	2551	10 47.1
	22	20 51 0.97	27.64	−18 16 29.8	1 44.9	1.035 1924	2649	10 43.7
	23	20 51 28.61	27.51	18 14 44.9	1 44.7	1.034 9275	2746	10 40.2
	24	20 51 56.12	27.38	18 13 0.2	1 44.3	1.034 6529	2844	10 36.7
	25	20 52 23.50	27.24	18 11 15.9	1 43.9	1.034 3685	2940	10 33.3
	26	20 52 50.74	27.10	18 9 32.0	1 43.6	1.034 0745	3037	10 29.8
	27	20 53 17.84	26.94	18 7 48.4	1 43.1	1.033 7708	3132	10 26.3
	28	20 53 44.78	26.80	−18 6 5.3	1 42.7	1.033 4576	3227	10 22.8
März	1	20 54 11.58	26.64	18 4 22.6	1 42.3	1.033 1349	3321	10 19.3
	2	20 54 38.22	26.47	18 2 40.3	1 41.9	1.032 8028	3413	10 15.8
	3	20 55 4.69	26.31	18 0 58.4	1 41.3	1.032 4615	3507	10 12.3
	4	20 55 31.00	26.14	17 59 17.1	1 40.9	1.032 1108	3597	10 8.8
	5	20 55 57.14	25.96	17 57 36.2	1 40.3	1.031 7511	3689	10 5.3
	6	20 56 23.10	25.78	−17 55 55.9	1 39.8	1.031 3822	3779	10 1.8
	7	20 56 48.88	25.60	17 54 16.1	1 39.2	1.031 0043	3868	9 58.3
	8	20 57 14.48	25.41	17 52 36.9	1 38.6	1.030 6175	3958	9 54.8
	9	20 57 39.89	25.23	17 50 58.3	1 38.0	1.030 2217	4044	9 51.3
	10	20 58 5.12	25.04	17 49 20.3	1 37.4	1.029 8173	4132	9 47.8
	11	20 58 30.16	24.85	17 47 42.9	1 36.7	1.029 4041	4218	9 44.2
	12	20 58 55.01	24.65	−17 46 6.2	1 36.0	1.028 9823	4305	9 40.7
	13	20 59 19.66	24.43	17 44 30.2	1 35.4	1.028 5518	4389	9 37.2
	14	20 59 44.09	24.23	17 42 54.8	1 34.6	1.028 1129	4475	9 33.7
	15	21 0 8.32	24.01	17 41 20.2	1 33.9	1.027 6654	4559	9 30.2
	16	21 0 32.33	23.80	17 39 46.3	1 33.2	1.027 2095	4643	9 26.6
	17	21 0 56.13	23.59	17 38 13.1	1 32.4	1.026 7452	4725	9 23.1
	18	21 1 19.72	23.36	−17 36 40.7	1 31.6	1.026 2727	4806	9 19.5
	19	21 1 43.08	23.14	17 35 9.1	1 30.8	1.025 7921	4888	9 16.0
	20	21 2 6.22	22.91	17 33 38.3	1 29.9	1.025 3033	4968	9 12.4
	21	21 2 29.13	22.66	17 32 8.4	1 29.0	1.024 8065	5048	9 8.9
	22	21 2 51.79	22.42	17 30 39.4	1 28.2	1.024 3017	5126	9 5.3
	23	21 3 14.21		−17 29 11.2		1.023 7891		9 1.8

Tag	Scheinbare Rektaszension (0h Welt-Zeit)		Scheinbare Deklination (0h Welt-Zeit)		log Δ (0h Welt-Zeit)		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
März 23	21 3 14.21	22.18	−17 29 11.2	1 27.2	1.023 7891	5203	9 1.8
24	21 3 36.39	21.93	17 27 44.0	1 26.2	1.023 2688	5281	8 58.2
25	21 3 58.32	21.68	17 26 17.8	1 25.3	1.022 7407	5356	8 54.6
26	21 4 20.00	21.42	17 24 52.5	1 24.3	1.022 2051	5430	8 51.1
27	21 4 41.42	21.16	17 23 28.2	1 23.3	1.021 6621	5504	8 47.5
28	21 5 2.58	20.89	17 22 4.9	1 22.2	1.021 1117	5576	8 43.9
29	21 5 23.47	20.63	−17 20 42.7	1 21.2	1.020 5541	5646	8 40.3
30	21 5 44.10	20.35	17 19 21.5	1 20.1	1.019 9895	5715	8 36.7
31	21 6 4.45	20.07	17 18 1.4	1 18.9	1.019 4180	5785	8 33.1
April 1	21 6 24.52	19.80	17 16 42.5	1 17.9	1.018 8395	5850	8 29.5
2	21 6 44.32	19.52	17 15 24.6	1 16.7	1.018 2545	5916	8 25.9
3	21 7 3.84	19.23	17 14 7.9	1 15.6	1.017 6629	5982	8 22.3
4	21 7 23.07	18.94	−17 12 52.3	1 14.4	1.017 0647	6044	8 18.7
5	21 7 42.01	18.65	17 11 37.9	1 13.2	1.016 4603	6107	8 15.1
6	21 8 0.66	18.35	17 10 24.7	1 11.9	1.015 8496	6167	8 11.5
7	21 8 19.01	18.05	17 9 12.8	1 10.7	1.015 2329	6227	8 7.8
8	21 8 37.06	17.76	17 8 2.1	1 9.5	1.014 6102	6285	8 4.2
9	21 8 54.82	17.46	17 6 52.6	1 8.1	1.013 9817	6342	8 0.6
10	21 9 12.28	17.14	−17 5 44.5	1 6.9	1.013 3475	6399	7 56.9
11	21 9 29.42	16.84	17 4 37.6	1 5.6	1.012 7076	6453	7 53.3
12	21 9 46.26	16.52	17 3 32.0	1 4.3	1.012 0623	6507	7 49.6
13	21 10 2.78	16.22	17 2 27.7	1 2.9	1.011 4116	6559	7 45.9
14	21 10 19.00	15.89	17 1 24.8	1 1.5	1.010 7557	6609	7 42.3
15	21 10 34.89	15.57	17 0 23.3	1 0.2	1.010 0948	6658	7 38.6
16	21 10 50.46	15.24	−16 59 23.1	0 58.8	1.009 4290	6708	7 34.9
17	21 11 5.70	14.92	16 58 24.3	0 57.3	1.008 7582	6754	7 31.3
18	21 11 20.62	14.58	16 57 27.0	0 56.0	1.008 0828	6800	7 27.6
19	21 11 35.20	14.25	16 56 31.0	0 54.4	1.007 4028	6845	7 23.9
20	21 11 49.45	13.91	16 55 36.6	0 53.0	1.006 7183	6886	7 20.2
21	21 12 3.36	13.57	16 54 43.6	0 51.4	1.006 0297	6928	7 16.5
22	21 12 16.93	13.22	−16 53 52.2	0 50.0	1.005 3369	6967	7 12.8
23	21 12 30.15	12.87	16 53 2.2	0 48.4	1.004 6402	7005	7 9.1
24	21 12 43.02	12.53	16 52 13.8	0 46.8	1.003 9397	7040	7 5.3
25	21 12 55.55	12.17	16 51 27.0	0 45.3	1.003 2357	7074	7 1.6
26	21 13 7.72	11.81	16 50 41.7	0 43.8	1.002 5283	7107	6 57.9
27	21 13 19.53	11.46	16 49 57.9	0 42.2	1.001 8176	7137	6 54.1
28	21 13 30.99	11.10	−16 49 15.7	0 40.5	1.001 1039	7165	6 50.4
29	21 13 42.09	10.74	16 48 35.2	0 38.8	1.000 3874	7192	6 46.6
30	21 13 52.83	10.37	16 47 56.4	0 37.2	0.999 6682	7217	6 42.9
Mai 1	21 14 3.20	10.01	16 47 19.2	0 35.6	0.998 9465	7239	6 39.1
2	21 14 13.21	9.64	16 46 43.6	0 34.0	0.998 2226	7261	6 35.4
3	21 14 22.85		−16 46 9.6		0.997 4965		6 31.6

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	″			h m
Mai 3	21 14 22.85	9.27	−16 46 9.6	32.2	0.997 4965	7279	6 31.6
4	21 14 32.12	8.89	16 45 37.4	30.6	0.996 7686	7296	6 27.8
5	21 14 41.01	8.53	16 45 6.8	28.9	0.996 0390	7313	6 24.0
6	21 14 49.54	8.15	16 44 37.9	27.2	0.995 3077	7327	6 20.2
7	21 14 57.69	7.78	16 44 10.7	25.6	0.994 5750	7339	6 16.4
8	21 15 5.47	7.40	16 43 45.1	23.8	0.993 8411	7348	6 12.6
9	21 15 12.87	7.03	−16 43 21.3	22.2	0.993 1063	7357	6 8.8
10	21 15 19.90	6.64	16 42 59.1	20.4	0.992 3706	7363	6 5.0
11	21 15 26.54	6.27	16 42 38.7	18.6	0.991 6343	7369	6 1.2
12	21 15 32.81	5.88	16 42 20.1	17.0	0.990 8974	7371	5 57.3
13	21 15 38.69	5.50	16 42 3.1	15.2	0.990 1603	7372	5 53.5
14	21 15 44.19	5.12	16 41 47.9	13.4	0.989 4231	7372	5 49.7
15	21 15 49.31	4.73	−16 41 34.5	11.7	0.988 6859	7369	5 45.8
16	21 15 54.04	4.34	16 41 22.8	10.0	0.987 9490	7365	5 42.0
17	21 15 58.38	3.95	16 41 12.8	8.2	0.987 2125	7358	5 38.1
18	21 16 2.33	3.56	16 41 4.6	6.4	0.986 4767	7348	5 34.2
19	21 16 5.89	3.18	16 40 58.2	4.6	0.985 7419	7338	5 30.3
20	21 16 9.07	2.78	16 40 53.6	2.8	0.985 0081	7325	5 26.5
21	21 16 11.85	2.39	−16 40 50.8	1.0	0.984 2756	7308	5 22.6
22	21 16 14.24	2.00	16 40 49.8	0.8	0.983 5448	7291	5 18.7
23	21 16 16.24	1.60	16 40 50.6	2.6	0.982 8157	7270	5 14.8
24	21 16 17.84	1.22	16 40 53.2	4.4	0.982 0887	7248	5 10.9
25	21 16 19.06	0.82	16 40 57.6	6.1	0.981 3639	7223	5 6.9
26	21 16 19.88	0.42	16 41 3.7	8.0	0.980 6416	7195	5 3.0
27	21 16 20.30	0.03	−16 41 11.7	9.7	0.979 9221	7165	4 59.1
28	21 16 20.33	0.36	16 41 21.4	11.5	0.979 2056	7133	4 55.2
29	21 16 19.97	0.74	16 41 32.9	13.3	0.978 4923	7099	4 51.3
30	21 16 19.23	1.14	16 41 46.2	15.0	0.977 7824	7063	4 47.3
31	21 16 18.09	1.52	16 42 1.2	16.8	0.977 0761	7024	4 43.4
Juni 1	21 16 16.57	1.91	16 42 18.0	18.5	0.976 3737	6982	4 39.4
2	21 16 14.66	2.30	−16 42 36.5	20.2	0.975 6755	6939	4 35.4
3	21 16 12.36	2.68	16 42 56.7	22.0	0.974 9816	6893	4 31.5
4	21 16 9.68	3.06	16 43 18.7	23.8	0.974 2923	6846	4 27.5
5	21 16 6.62	3.44	16 43 42.5	25.4	0.973 6077	6796	4 23.5
6	21 16 3.18	3.81	16 44 7.9	27.0	0.972 9281	6745	4 19.5
7	21 15 59.37	4.19	16 44 34.9	28.8	0.972 2536	6690	4 15.5
8	21 15 55.18	4.57	−16 45 3.7	30.4	0.971 5846	6635	4 11.5
9	21 15 50.61	4.94	16 45 34.1	32.0	0.970 9211	6577	4 7.5
10	21 15 45.67	5.31	16 46 6.1	33.8	0.970 2634	6516	4 3.5
11	21 15 40.36	5.69	16 46 39.9	35.3	0.969 6118	6454	3 59.5
12	21 15 34.67	6.05	16 47 15.2	36.9	0.968 9664	6389	3 55.4
13	21 15 28.62		−16 47 52.1		0.968 3275		3 51.4

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
Juni 13	21 15 28.62	6.41	−16 47 52.1	0 38.6	0.968 3275	6322	3 51.4
14	21 15 22.21	6.77	16 48 30.7	0 40.2	0.967 6953	6252	3 47.4
15	21 15 15.44	7.14	16 49 10.9	0 41.7	0.967 0701	6181	3 43.3
16	21 15 8.30	7.49	16 49 52.6	0 43.2	0.966 4520	6107	3 39.3
17	21 15 0.81	7.85	16 50 35.8	0 44.8	0.965 8413	6029	3 35.2
18	21 14 52.96	8.19	16 51 20.6	0 46.4	0.965 2384	5952	3 31.2
19	21 14 44.77	8.54	−16 52 7.0	0 47.8	0.964 6432	5870	3 27.1
20	21 14 36.23	8.89	16 52 54.8	0 49.4	0.964 0562	5785	3 23.0
21	21 14 27.34	9.23	16 53 44.2	0 50.8	0.963 4777	5700	3 18.9
22	21 14 18.11	9.56	16 54 35.0	0 52.2	0.962 9077	5611	3 14.8
23	21 14 8.55	9.90	16 55 27.2	0 53.6	0.962 3466	5521	3 10.8
24	21 13 58.65	10.22	16 56 20.8	0 55.0	0.961 7945	5428	3 6.7
25	21 13 48.43	10.55	−16 57 15.8	0 56.3	0.961 2517	5334	3 2.6
26	21 13 37.88	10.86	16 58 12.1	0 57.7	0.960 7183	5236	2 58.5
27	21 13 27.02	11.16	16 59 9.8	0 58.9	0.960 1947	5137	2 54.3
28	21 13 15.86	11.48	17 0 8.7	1 0.2	0.959 6810	5036	2 50.2
29	21 13 4.38	11.77	17 1 8.9	1 1.4	0.959 1774	4932	2 46.1
30	21 12 52.61	12.07	17 2 10.3	1 2.7	0.958 6842	4827	2 42.0
Juli 1	21 12 40.54	12.35	−17 3 13.0	1 3.7	0.958 2015	4721	2 37.9
2	21 12 28.19	12.64	17 4 16.7	1 4.9	0.957 7294	4611	2 33.7
3	21 12 15.55	12.92	17 5 21.6	1 6.0	0.957 2683	4501	2 29.6
4	21 12 2.63	13.19	17 6 27.6	1 7.1	0.956 8182	4388	2 25.4
5	21 11 49.44	13.44	17 7 34.7	1 8.1	0.956 3794	4275	2 21.2
6	21 11 36.00	13.70	17 8 42.8	1 9.0	0.955 9519	4159	2 17.1
7	21 11 22.30	13.96	−17 9 51.8	1 10.0	0.955 5360	4042	2 12.9
8	21 11 8.34	14.20	17 11 1.8	1 11.0	0.955 1318	3924	2 8.8
9	21 10 54.14	14.44	17 12 12.8	1 11.8	0.954 7394	3804	2 4.6
10	21 10 39.70	14.68	17 13 24.6	1 12.8	0.954 3590	3683	2 0.4
11	21 10 25.02	14.90	17 14 37.4	1 13.6	0.953 9907	3559	1 56.3
12	21 10 10.12	15.12	17 15 51.0	1 14.4	0.953 6348	3433	1 52.1
13	21 9 55.00	15.33	−17 17 5.4	1 15.2	0.953 2915	3307	1 47.9
14	21 9 39.67	15.55	17 18 20.6	1 15.8	0.952 9608	3178	1 43.7
15	21 9 24.12	15.75	17 19 36.4	1 16.6	0.952 6430	3049	1 39.5
16	21 9 8.37	15.93	17 20 53.0	1 17.3	0.952 3381	2917	1 35.3
17	21 8 52.44	16.12	17 22 10.3	1 17.9	0.952 0464	2785	1 31.1
18	21 8 36.32	16.30	17 23 28.2	1 18.5	0.951 7679	2650	1 26.9
19	21 8 20.02	16.46	−17 24 46.7	1 18.9	0.951 5029	2514	1 22.7
20	21 8 3.56	16.62	17 26 5.6	1 19.5	0.951 2515	2377	1 18.5
21	21 7 46.94	16.77	17 27 25.1	1 19.9	0.951 0138	2239	1 14.3
22	21 7 30.17	16.91	17 28 45.0	1 20.4	0.950 7899	2101	1 10.1
23	21 7 13.26	17.05	17 30 5.4	1 20.7	0.950 5798	1961	1 5.9
24	21 6 56.21		−17 31 26.1		0.950 3837		1 1.7

Saturn 1933

Tag		0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933		h m s	s	° ′ ″	′ ″			h m
Juli	24	21 6 56.21	17.17	−17 31 26.1	1 21.1	0.950 3837	1819	1 1.7
	25	21 6 39.04	17.29	17 32 47.2	1 21.3	0.950 2018	1677	0 57.5
	26	21 6 21.75	17.39	17 34 8.5	1 21.6	0.950 0341	1534	0 53.2
	27	21 6 4.36	17.48	17 35 30.1	1 21.7	0.949 8807	1392	0 49.0
	28	21 5 46.88	17.58	17 36 51.8	1 21.9	0.949 7415	1248	0 44.8
	29	21 5 29.30	17.65	17 38 13.7	1 22.0	0.949 6167	1102	0 40.6
	30	21 5 11.65	17.72	−17 39 35.7	1 22.0	0.949 5065	958	0 36.4
	31	21 4 53.93	17.78	17 40 57.7	1 22.1	0.949 4107	814	0 32.1
Aug.	1	21 4 36.15	17.83	17 42 19.8	1 22.1	0.949 3293	668	0 27.9
	2	21 4 18.32	17.87	17 43 41.9	1 22.0	0.949 2625	524	0 23.7
	3	21 4 0.45	17.91	17 45 3.9	1 21.9	0.949 2101	378	0 19.5
	4	21 3 42.54	17.93	17 46 25.8	1 21.8	0.949 1723	233	0 15.2
	5	21 3 24.61	17.94	−17 47 47.6	1 21.6	0.949 1490	88	0 11.0
	6	21 3 6.67	17.95	17 49 9.2	1 21.4	0.949 1402	58	0 6.8
	7	21 2 48.72	17.96	17 50 30.6	1 21.1	0.949 1460	204	{0 2.5 23 58.3}
	8	21 2 30.76	17.94	17 51 51.7	1 20.9	0.949 1664	349	23 54.1
	9	21 2 12.82	17.92	17 53 12.6	1 20.5	0.949 2013	494	23 49.9
	10	21 1 54.90	17.89	17 54 33.1	1 20.2	0.949 2507	640	23 45.6
	11	21 1 37.01	17.86	−17 55 53.3	1 19.9	0.949 3147	786	23 41.4
	12	21 1 19.15	17.81	17 57 13.2	1 19.4	0.949 3933	931	23 37.2
	13	21 1 1.34	17.76	17 58 32.6	1 18.9	0.949 4864	1077	23 33.0
	14	21 0 43.58	17.68	17 59 51.5	1 18.4	0.949 5941	1222	23 28.7
	15	21 0 25.90	17.62	18 1 9.9	1 17.9	0.949 7163	1366	23 24.5
	16	21 0 8.28	17.53	18 2 27.8	1 17.3	0.949 8529	1510	23 20.3
	17	20 59 50.75	17.44	−18 3 45.1	1 16.6	0.950 0039	1652	23 16.0
	18	20 59 33.31	17.33	18 5 1.7	1 16.0	0.950 1691	1796	23 11.8
	19	20 59 15.98	17.23	18 6 17.7	1 15.3	0.950 3487	1937	23 7.6
	20	20 58 58.75	17.10	18 7 33.0	1 14.6	0.950 5424	2078	23 3.4
	21	20 58 41.65	16.97	18 8 47.6	1 13.8	0.950 7502	2219	22 59.2
	22	20 58 24.68	16.82	18 10 1.4	1 13.0	0.950 9721	2359	22 55.0
	23	20 58 7.86	16.68	−18 11 14.4	1 12.2	0.951 2080	2496	22 50.8
	24	20 57 51.18	16.52	18 12 26.6	1 11.2	0.951 4576	2634	22 46.6
	25	20 57 34.66	16.35	18 13 37.8	1 10.4	0.951 7210	2769	22 42.4
	26	20 57 18.31	16.17	18 14 48.2	1 9.4	0.951 9979	2903	22 38.2
	27	20 57 2.14	15.99	18 15 57.6	1 8.4	0.952 2882	3037	22 34.0
	28	20 56 46.15	15.80	18 17 6.0	1 7.5	0.952 5919	3167	22 29.8
	29	20 56 30.35	15.60	−18 18 13.5	1 6.4	0.952 9086	3296	22 25.6
	30	20 56 14.75	15.39	18 19 19.9	1 5.3	0.953 2382	3426	22 21.4
	31	20 55 59.36	15.17	18 20 25.2	1 4.3	0.953 5808	3552	22 17.2
Sept.	1	20 55 44.19	14.94	18 21 29.5	1 3.1	0.953 9360	3677	22 13.0
	2	20 55 29.25	14.72	18 22 32.6	1 1.9	0.954 3037	3800	22 8.9
	3	20 55 14.53		−18 23 34.5		0.954 6837		22 4.7

Tag	0ʰ Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	s	° ′ ″	″			h m
Sept. 3	20 55 14.53	14.48	−18 23 34.5	60.9	0.954 6837	3922	22 4.7
4	20 55 0.05	14.24	18 24 35.4	59.7	0.955 0759	4042	22 0.5
5	20 54 45.81	13.98	18 25 35.1	58.5	0.955 4801	4161	21 56.3
6	20 54 31.83	13.72	18 26 33.6	57.2	0.955 8962	4279	21 52.2
7	20 54 18.11	13.45	18 27 30.8	55.9	0.956 3241	4393	21 48.0
8	20 54 4.66	13.19	18 28 26.7	54.7	0.956 7634	4506	21 43.9
9	20 53 51.47	12.91	−18 29 21.4	53.5	0.957 2140	4619	21 39.8
10	20 53 38.56	12.62	18 30 14.9	52.1	0.957 6759	4729	21 35.6
11	20 53 25.94	12.33	18 31 7.0	50.7	0.958 1488	4838	21 31.5
12	20 53 13.61	12.03	18 31 57.7	49.4	0.958 6326	4944	21 27.3
13	20 53 1.58	11.72	18 32 47.1	48.1	0.959 1270	5049	21 23.2
14	20 52 49.86	11.41	18 33 35.2	46.7	0.959 6319	5151	21 19.1
15	20 52 38.45	11.10	−18 34 21.9	45.2	0.960 1470	5252	21 15.0
16	20 52 27.35	10.78	18 35 7.1	43.8	0.960 6722	5350	21 10.9
17	20 52 16.57	10.44	18 35 50.9	42.4	0.961 2072	5447	21 6.8
18	20 52 6.13	10.10	18 36 33.3	40.8	0.961 7519	5541	21 2.7
19	20 51 56.03	9.76	18 37 14.1	39.4	0.962 3060	5632	20 58.6
20	20 51 46.27	9.41	18 37 53.5	37.8	0.962 8692	5722	20 54.5
21	20 51 36.86	9.07	−18 38 31.3	36.4	0.963 4414	5809	20 50.4
22	20 51 27.79	8.71	18 39 7.7	34.8	0.964 0223	5893	20 46.3
23	20 51 19.08	8.35	18 39 42.5	33.4	0.964 6116	5976	20 42.2
24	20 51 10.73	7.99	18 40 15.9	31.7	0.965 2092	6056	20 38.2
25	20 51 2.74	7.61	18 40 47.6	30.1	0.965 8148	6133	20 34.1
26	20 50 55.13	7.24	18 41 17.7	28.6	0.966 4281	6206	20 30.0
27	20 50 47.89	6.87	−18 41 46.3	26.9	0.967 0487	6279	20 26.0
28	20 50 41.02	6.48	18 42 13.2	25.4	0.967 6766	6349	20 22.0
29	20 50 34.54	6.10	18 42 38.6	23.8	0.968 3115	6416	20 17.9
30	20 50 28.44	5.72	18 43 2.4	22.2	0.968 9531	6482	20 13.9
Okt. 1	20 50 22.72	5.33	18 43 24.6	20.6	0.969 6013	6544	20 9.9
2	20 50 17.39	4.94	18 43 45.2	18.9	0.970 2557	6605	20 5.9
3	20 50 12.45	4.55	−18 44 4.1	17.3	0.970 9162	6664	20 1.9
4	20 50 7.90	4.16	18 44 21.4	15.7	0.971 5826	6719	19 57.9
5	20 50 3.74	3.75	18 44 37.1	14.0	0.972 2545	6773	19 53.9
6	20 49 59.99	3.37	18 44 51.1	12.5	0.972 9318	6823	19 49.9
7	20 49 56.62	2.97	18 45 3.6	10.8	0.973 6141	6874	19 45.9
8	20 49 53.65	2.56	18 45 14.4	9.2	0.974 3015	6920	19 41.9
9	20 49 51.09	2.16	−18 45 23.6	7.6	0.974 9935	6965	19 38.0
10	20 49 48.93	1.74	18 45 31.2	5.8	0.975 6900	7006	19 34.0
11	20 49 47.19	1.34	18 45 37.0	4.2	0.976 3906	7047	19 30.0
12	20 49 45.85	0.93	18 45 41.2	2.6	0.977 0953	7085	19 26.1
13	20 49 44.92	0.52	18 45 43.8	0.9	0.977 8038	7119	19 22.1
14	20 49 44.40		−18 45 44.7		0.978 5157		19 18.2

Saturn 1933

Tag	0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	″			h m
Okt. 14	20 49 44.40	−0.11	−18 45 44.7	0.8	0.978 5157	7153	19 18.2
15	20 49 44.29	0.30	18 45 43.9	2.4	0.979 2310	7183	19 14.3
16	20 49 44.59	0.72	18 45 41.5	4.2	0.979 9493	7211	19 10.4
17	20 49 45.31	1.14	18 45 37.3	5.8	0.980 6704	7238	19 6.4
18	20 49 46.45	1.55	18 45 31.5	7.5	0.981 3942	7260	19 2.5
19	20 49 48.00	1.96	18 45 24.0	9.2	0.982 1202	7281	18 58.6
20	20 49 49.96	2.38	−18 45 14.8	10.8	0.982 8483	7300	18 54.8
21	20 49 52.34	2.80	18 45 4.0	12.5	0.983 5783	7316	18 50.9
22	20 49 55.14	3.22	18 44 51.5	14.2	0.984 3099	7329	18 47.0
23	20 49 58.36	3.63	18 44 37.3	15.8	0.985 0428	7339	18 43.1
24	20 50 1.99	4.04	18 44 21.5	17.5	0.985 7767	7348	18 39.2
25	20 50 6.03	4.46	18 44 4.0	19.2	0.986 5115	7354	18 35.4
26	20 50 10.49	4.87	−18 43 44.8	20.8	0.987 2469	7357	18 31.5
27	20 50 15.36	5.28	18 43 24.0	22.5	0.987 9826	7360	18 27.7
28	20 50 20.64	5.68	18 43 1.5	24.1	0.988 7186	7359	18 23.8
29	20 50 26.32	6.09	18 42 37.4	25.7	0.989 4545	7357	18 20.0
30	20 50 32.41	6.49	18 42 11.7	27.4	0.990 1902	7351	18 16.2
31	20 50 38.90	6.90	18 41 44.3	29.0	0.990 9253	7345	18 12.4
Nov. 1	20 50 45.80	7.30	−18 41 15.3	30.6	0.991 6598	7336	18 8.5
2	20 50 53.10	7.70	18 40 44.7	32.1	0.992 3934	7327	18 4.7
3	20 51 0.80	8.10	18 40 12.6	33.8	0.993 1261	7314	18 0.9
4	20 51 8.90	8.49	18 39 38.8	35.4	0.993 8575	7300	17 57.1
5	20 51 17.39	8.88	18 39 3.4	36.9	0.994 5875	7283	17 53.4
6	20 51 26.27	9.28	18 38 26.5	38.6	0.995 3158	7265	17 49.6
7	20 51 35.55	9.66	−18 37 47.9	40.1	0.996 0423	7245	17 45.8
8	20 51 45.21	10.05	18 37 7.8	41.8	0.996 7668	7223	17 42.0
9	20 51 55.26	10.44	18 36 26.0	43.4	0.997 4891	7199	17 38.3
10	20 52 5.70	10.82	18 35 42.6	44.8	0.998 2090	7173	17 34.5
11	20 52 16.52	11.21	18 34 57.8	46.4	0.998 9263	7146	17 30.8
12	20 52 27.73	11.58	18 34 11.4	48.0	0.999 6409	7116	17 27.1
13	20 52 39.31	11.96	−18 33 23.4	49.4	1.000 3525	7086	17 23.3
14	20 52 51.27	12.33	18 32 34.0	51.0	1.001 0611	7051	17 19.6
15	20 53 3.60	12.71	18 31 43.0	52.6	1.001 7662	7017	17 15.9
16	20 53 16.31	13.07	18 30 50.4	54.2	1.002 4679	6980	17 12.1
17	20 53 29.38	13.43	18 29 56.2	55.6	1.003 1659	6940	17 8.4
18	20 53 42.81	13.81	18 29 0.6	57.2	1.003 8599	6900	17 4.7
19	20 53 56.62	14.15	−18 28 3.4	58.6	1.004 5499	6857	17 1.0
20	20 54 10.77	14.51	18 27 4.8	60.1	1.005 2356	6811	16 57.3
21	20 54 25.28	14.87	18 26 4.7	61.6	1.005 9167	6764	16 53.7
22	20 54 40.15	15.21	18 25 3.1	63.0	1.006 5931	6716	16 50.0
23	20 54 55.36	15.55	18 24 0.1	64.5	1.007 2647	6666	16 46.3
24	20 55 10.91		−18 22 55.6		1.007 9313		16 42.6

Tag	0h Welt-Zeit: Scheinbare Rektaszension		0h Welt-Zeit: Scheinbare Deklination		0h Welt-Zeit: log Δ		Obere Kulmination in Greenwich
1933	h m s	s	° ′ ″	′ ″			h m
Nov. 24	20 55 10.91	15.89	−18 22 55.6	1 6.0	1.007 9313	6615	16 42.6
25	20 55 26.80	16.22	18 21 49.6	1 7.4	1.008 5928	6563	16 38.9
26	20 55 43.02	16.56	18 20 42.2	1 8.7	1.009 2491	6508	16 35.3
27	20 55 59.58	16.88	18 19 33.5	1 10.2	1.009 8999	6454	16 31.6
28	20 56 16.46	17.21	18 18 23.3	1 11.5	1.010 5453	6396	16 28.0
29	20 56 33.67	17.52	18 17 11.8	1 12.9	1.011 1849	6338	16 24.4
30	20 56 51.19	17.84	−18 15 58.9	1 14.3	1.011 8187	6279	16 20.7
Dez. 1	20 57 9.03	18.14	18 14 44.6	1 15.6	1.012 4466	6217	16 17.1
2	20 57 27.17	18.45	18 13 29.0	1 16.9	1.013 0683	6156	16 13.4
3	20 57 45.62	18.75	18 12 12.1	1 18.3	1.013 6839	6093	16 9.8
4	20 58 4.37	19.05	18 10 53.8	1 19.6	1.014 2932	6028	16 6.2
5	20 58 23.42	19.35	18 9 34.2	1 20.9	1.014 8960	5963	16 2.6
6	20 58 42.77	19.63	−18 8 13.3	1 22.1	1.015 4923	5896	15 59.0
7	20 59 2.40	19.93	18 6 51.2	1 23.5	1.016 0819	5827	15 55.4
8	20 59 22.33	20.21	18 5 27.7	1 24.7	1.016 6646	5757	15 51.8
9	20 59 42.54	20.49	18 4 3.0	1 26.0	1.017 2403	5687	15 48.2
10	21 0 3.03	20.76	18 2 37.0	1 27.3	1.017 8090	5614	15 44.6
11	21 0 23.79	21.03	18 1 9.7	1 28.5	1.018 3704	5542	15 41.0
12	21 0 44.82	21.30	−17 59 41.2	1 29.7	1.018 9246	5469	15 37.4
13	21 1 6.12	21.56	17 58 11.5	1 30.9	1.019 4715	5393	15 33.9
14	21 1 27.68	21.82	17 56 40.6	1 32.2	1.020 0108	5316	15 30.3
15	21 1 49.50	22.07	17 55 8.4	1 33.3	1.020 5424	5238	15 26.7
16	21 2 11.57	22.32	17 53 35.1	1 34.5	1.021 0662	5158	15 23.1
17	21 2 33.89	22.56	17 52 0.6	1 35.7	1.021 5820	5078	15 19.6
18	21 2 56.45	22.81	−17 50 24.9	1 36.8	1.022 0898	4996	15 16.0
19	21 3 19.26	23.04	17 48 48.1	1 37.9	1.022 5894	4913	15 12.5
20	21 3 42.30	23.26	17 47 10.2	1 39.0	1.023 0807	4830	15 9.0
21	21 4 5.56	23.49	17 45 31.2	1 40.1	1.023 5637	4747	15 5.4
22	21 4 29.05	23.71	17 43 51.1	1 41.1	1.024 0384	4661	15 1.9
23	21 4 52.76	23.93	17 42 10.0	1 42.2	1.024 5045	4575	14 58.3
24	21 5 16.69	24.13	−17 40 27.8	1 43.3	1.024 9620	4488	14 54.8
25	21 5 40.82	24.33	17 38 44.5	1 44.2	1.025 4108	4401	14 51.3
26	21 6 5.15	24.54	17 37 0.3	1 45.3	1.025 8509	4313	14 47.7
27	21 6 29.69	24.73	17 35 15.0	1 46.2	1.026 2822	4224	14 44.2
28	21 6 54.42	24.92	17 33 28.8	1 47.2	1.026 7046	4134	14 40.7
29	21 7 19.34	25.10	17 31 41.6	1 48.2	1.027 1180	4045	14 37.2
30	21 7 44.44	25.28	−17 29 53.4	1 49.1	1.027 5225	3953	14 33.7
31	21 8 9.72	25.46	17 28 4.3	1 50.0	1.027 9178	3863	14 30.2
32	21 8 35.18		−17 26 14.3		1.028 3041		14 26.6

Uranus 1933

Tag		0h Welt-Zeit Scheinbare Rektaszension		Scheinbare Deklination		log Δ		Obere Kulmination in Greenwich
1933		h m s	s	° ′ ″	′ ″			h m
Jan.	0	1 12 43.30	2.97	+7 2 52.5	0 27.8	1.295 3818	1 4956	18 32.9
	4	1 12 46.27	6.10	7 3 20.3	0 46.8	1.296 8774	1 5012	18 17.2
	8	1 12 52.37	9.19	7 4 7.1	1 5.3	1.298 3786	1 4997	18 1.6
	12	1 13 1.56	12.23	7 5 12.4	1 24.0	1.299 8783	1 4912	17 46.0
	16	1 13 13.79	15.26	7 6 36.4	1 42.0	1.301 3695	1 4758	17 30.5
	20	1 13 29.05	18.23	7 8 18.4	1 59.9	1.302 8453	1 4544	17 15.0
	24	1 13 47.28	21.15	+7 10 18.3	2 17.3	1.304 2997	1 4252	16 59.6
	28	1 14 8.43	23.96	7 12 35.6	2 34.2	1.305 7249	1 3894	16 44.2
Febr.	1	1 14 32.39	26.69	7 15 9.8	2 50.1	1.307 1143	1 3472	16 28.9
	5	1 14 59.08	29.28	7 17 59.9	3 5.5	1.308 4615	1 2998	16 13.6
	9	1 15 28.36	31.76	7 21 5.4	3 20.0	1.309 7613	1 2472	15 58.4
	13	1 16 0.12	34.12	7 24 25.4	3 33.7	1.311 0085	1 1901	15 43.2
	17	1 16 34.24	36.39	+7 27 59.1	3 46.7	1.312 1986	1 1283	15 28.0
	21	1 17 10.63	38.49	7 31 45.8	3 58.9	1.313 3269	1 0617	15 12.9
	25	1 17 49.12	40.47	7 35 44.7	4 10.0	1.314 3886	9908	14 57.8
März	1	1 18 29.59	42.29	7 39 54.7	4 20.2	1.315 3794	9160	14 42.8
	5	1 19 11.88	43.93	7 44 14.9	4 29.2	1.316 2954	8385	14 27.8
	9	1 19 55.81	45.42	7 48 44.1	4 37.3	1.317 1339	7582	14 12.8
	13	1 20 41.23	46.76	+7 53 21.4	4 44.5	1.317 8921	6761	13 57.8
	17	1 21 27.99	47.96	7 58 5.9	4 50.7	1.318 5682	5916	13 42.9
	21	1 22 15.95	49.00	8 2 56.6	4 55.9	1.319 1598	5048	13 27.9
	25	1 23 4.95	49.85	8 7 52.5	5 0.2	1.319 6646	4161	13 13.0
	29	1 23 54.80	50.55	8 12 52.7	5 3.1	1.320 0807	3260	12 58.1
April	2	1 24 45.35	51.05	8 17 55.8	5 5.2	1.320 4067	2360	12 43.2
	6	1 25 36.40	51.41	+8 23 1.0	5 6.1	1.320 6427	1451	12 28.4
	10	1 26 27.81	51.60	8 28 7.1	5 6.3	1.320 7878	546	12 13.5
	14	1 27 19.41	51.63	8 33 13.4	5 5.4	1.320 8424	357	11 58.6
	18	1 28 11.04	51.51	8 38 18.8	5 3.6	1.320 8067	1265	11 43.7
	22	1 29 2.55	51.21	8 43 22.4	5 0.9	1.320 6802	2163	11 28.9
	26	1 29 53.76	50.75	8 48 23.3	4 57.0	1.320 4639	3060	11 14.0
	30	1 30 44.51	50.11	+8 53 20.3	4 52.3	1.320 1579	3935	10 59.1
Mai	4	1 31 34.62	49.32	8 58 12.6	4 46.6	1.319 7644	4791	10 44.2
	8	1 32 23.94	48.38	9 2 59.2	4 40.3	1.319 2853	5632	10 29.3
	12	1 33 12.32	47.30	9 7 39.5	4 33.0	1.318 7221	6447	10 14.4
	16	1 33 59.62	46.08	9 12 12.5	4 25.0	1.318 0774	7250	9 59.4
	20	1 34 45.70	44.70	9 16 37.5	4 16.1	1.317 3524	8025	9 44.4
	24	1 35 30.40	43.15	+9 20 53.6	4 6.2	1.316 5499	8772	9 29.4
	28	1 36 13.55	41.48	9 24 59.8	3 55.9	1.315 6727	9484	9 14.4
Juni	1	1 36 55.03	39.66	9 28 55.7	3 44.6	1.314 7243	1 0157	8 59.4
	5	1 37 34.69	37.72	9 32 40.3	3 32.7	1.313 7086	1 0794	8 44.3
	9	1 38 12.41	35.67	9 36 13.0	3 20.3	1.312 6292	1 1394	8 29.2
	13	1 38 48.08		+9 39 33.3		1.311 4898		8 14.1

Tag		Scheinbare Rektaszension (0h Welt-Zeit)		Scheinbare Deklination (0h Welt-Zeit)		log Δ (0h Welt-Zeit)		Obere Kulmination in Greenwich
1933		h m s	s	° ′ ″	′ ″			h m
Juni	13	1 38 48.08	33.51	+9 39 33.3	3 7.5	1.311 4898	1 1955	8 14.1
	17	1 39 21.59	31.21	9 42 40.8	2 53.6	1.310 2943	1 2473	7 58.9
	21	1 39 52.80	28.80	9 45 34.4	2 39.5	1.309 0470	1 2949	7 43.7
	25	1 40 21.60	26.28	9 48 13.9	2 24.5	1.307 7521	1 3366	7 28.4
	29	1 40 47.88	23.67	9 50 38.4	2 9.4	1.306 4155	1 3730	7 13.1
Juli	3	1 41 11.55	21.00	9 52 47.8	1 53.9	1.305 0425	1 4038	6 57.8
	7	1 41 32.55	18.25	+9 54 41.7	1 38.0	1.303 6387	1 4291	6 42.4
	11	1 41 50.80	15.44	9 56 19.7	1 21.9	1.302 2096	1 4492	6 27.0
	15	1 42 6.24	12.56	9 57 41.6	1 5.4	1.300 7604	1 4636	6 11.5
	19	1 42 18.80	9.64	9 58 47.0	0 48.5	1.299 2968	1 4714	5 56.0
	23	1 42 28.44	6.66	9 59 35.5	0 31.6	1.297 8254	1 4723	5 40.4
	27	1 42 35.10	3.69	10 0 7.1	0 14.8	1.296 3531	1 4661	5 24.8
	31	1 42 38.79	0.70	+10 0 21.9	0 2.1	1.294 8870	1 4538	5 9.1
Aug.	4	1 42 39.49	2.25	10 0 19.8	0 18.7	1.293 4332	1 4342	4 53.4
	8	1 42 37.24	5.19	10 0 1.1	0 35.3	1.291 9990	1 4089	4 37.6
	12	1 42 32.05	8.11	9 59 25.8	0 51.7	1.290 5901	1 3762	4 21.8
	16	1 42 23.94	10.98	9 58 34.1	1 7.9	1.289 2139	1 3368	4 6.0
	20	1 42 12.96	13.79	9 57 26.2	1 23.7	1.287 8771	1 2899	3 50.1
	24	1 41 59.17	16.50	+9 56 2.5	1 38.9	1.286 5872	1 2360	3 34.1
	28	1 41 42.67	19.10	9 54 23.6	1 53.3	1.285 3512	1 1753	3 18.1
Sept.	1	1 41 23.57	21.58	9 52 30.3	2 7.3	1.284 1759	1 1087	3 2.1
	5	1 41 1.99	23.91	9 50 23.0	2 20.4	1.283 0672	1 0360	2 46.0
	9	1 40 38.08	26.14	9 48 2.6	2 32.7	1.282 0312	9577	2 29.9
	13	1 40 11.94	28.18	9 45 29.9	2 44.3	1.281 0735	8735	2 13.7
	17	1 39 43.76	30.06	+9 42 45.6	2 54.8	1.280 2000	7832	1 57.5
	21	1 39 13.70	31.73	9 39 50.8	3 4.0	1.279 4168	6876	1 41.3
	25	1 38 41.97	33.17	9 36 46.8	3 12.1	1.278 7292	5882	1 25.0
	29	1 38 8.80	34.40	9 33 34.7	3 18.7	1.278 1410	4854	1 8.7
Okt.	3	1 37 34.40	35.40	9 30 16.0	3 24.3	1.277 6556	3797	0 52.4
	7	1 36 59.00	36.18	9 26 51.7	3 28.5	1.277 2759	2713	0 36.1
	11	1 36 22.82	36.71	+9 23 23.2	3 31.3	1.277 0046	1607	0 19.8
	15	1 35 46.11	37.01	9 19 51.9	3 32.8	1.276 8439	480	{0 3.5 / 23 59.4}
	19	1 35 9.10	37.03	9 16 19.1	3 32.6	1.276 7959	652	23 43.0
	23	1 34 32.07	36.78	9 12 46.5	3 30.8	1.276 8611	1783	23 26.7
	27	1 33 55.29	36.27	9 9 15.7	3 27.6	1.277 0394	2903	23 10.3
	31	1 33 19.02	35.51	9 5 48.1	3 23.0	1.277 3297	3999	22 54.0
Nov.	4	1 32 43.51	34.53	+9 2 25.1	3 16.8	1.277 7296	5079	22 37.7
	8	1 32 8.98	33.32	8 59 8.3	3 9.6	1.278 2375	6131	22 21.4
	12	1 31 35.66	31.86	8 55 58.7	3 0.8	1.278 8506	7153	22 5.2
	16	1 31 3.80	30.17	8 52 57.9	2 50.5	1.279 5659	8134	21 48.9
	20	1 30 33.63	28.26	8 50 7.4	2 39.1	1.280 3793	9064	21 32.7
	24	1 30 5.37		+8 47 28.3		1.281 2857		21 16.5

Tag	0h Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	s	° ′ ″	′ ″			h m
Nov. 24	1 30 5.37	26.14	+8 47 28.3	2 26.4	1.281 2857	9938	21 16.5
28	1 29 39.23	23.86	8 45 1.9	2 12.7	1.282 2795	1 0747	21 0.3
Dez. 2	1 29 15.37	21.43	8 42 49.2	1 58.1	1.283 3542	1 1498	20 44.2
6	1 28 53.94	18.84	8 40 51.1	1 42.8	1.284 5040	1 2184	20 28.2
10	1 28 35.10	16.11	8 39 8.3	1 26.5	1.285 7224	1 2808	20 12.1
14	1 28 18.99	13.28	8 37 41.8	1 9.5	1.287 0032	1 3356	19 56.1
18	1 28 5.71	10.32	+8 36 32.3	0 51.9	1.288 3388	1 3829	19 40.2
22	1 27 55.39	7.29	8 35 40.4	0 33.9	1.289 7217	1 4219	19 24.3
26	1 27 48.10	4.21	8 35 6.5	0 15.7	1.291 1436	1 4530	19 8.5
30	1 27 43.89	1.10	8 34 50.8	0 2.6	1.292 5966	1 4768	18 52.7
34	1 27 42.79		+8 34 53.4		1.294 0734		18 37.0

Tag	0h Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	s	° ′ ″	′ ″			h m
Jan. 0	10 47 45.93	9.92	+8 33 24.0	1 9.3	1.472 5625	8704	4 10.2
4	10 47 36.01	11.75	8 34 33.3	1 20.0	1.471 6921	8326	3 54.3
8	10 47 24.26	13.50	8 35 53.3	1 30.3	1.470 8595	7899	3 38.4
12	10 47 10.76	15.15	8 37 23.6	1 40.0	1.470 0696	7435	3 22.5
16	10 46 55.61	16.72	8 39 3.6	1 49.1	1.469 3261	6930	3 6.5
20	10 46 38.89	18.20	8 40 52.7	1 57.4	1.468 6331	6383	2 50.5
24	10 46 20.69	19.53	+8 42 50.1	2 5.2	1.467 9948	5798	2 34.5
28	10 46 1.16	20.74	8 44 55.3	2 11.9	1.467 4150	5181	2 18.4
Febr. 1	10 45 40.42	21.82	8 47 7.2	2 17.8	1.466 8969	4531	2 2.3
5	10 45 18.60	22.73	8 49 25.0	2 22.7	1.466 4438	3863	1 46.2
9	10 44 55.87	23.49	8 51 47.7	2 26.7	1.466 0575	3175	1 30.1
13	10 44 32.38	24.13	8 54 14.4	2 29.9	1.465 7400	2471	1 14.0
17	10 44 8.25	24.61	+8 56 44.3	2 32.1	1.465 4929	1750	0 57.9
21	10 43 43.64	24.91	8 59 16.4	2 33.2	1.465 3179	1022	0 41.8
25	10 43 18.73	25.07	9 1 49.6	2 33.4	1.465 2157	282	0 25.6
März 1	10 42 53.66	25.04	9 4 23.0	2 32.6	1.465 1875	449	0 9.5
5	10 42 28.62	24.84	9 6 55.6	2 30.7	1.465 2324	1180	23 49.3
9	10 42 3.78	24.50	9 9 26.3	2 28.1	1.465 3504	1892	23 33.2
13	10 41 39.28	24.02	+9 11 54.4	2 24.4	1.465 5396	2595	23 17.0
17	10 41 15.26	23.37	9 14 18.8	2 20.0	1.465 7991	3285	23 0.9
21	10 40 51.89	22.59	9 16 38.8	2 14.6	1.466 1276	3955	22 44.8
25	10 40 29.30	21.65	9 18 53.4	2 8.5	1.466 5231	4600	22 28.7
29	10 40 7.65	20.58	9 21 1.9	2 1.4	1.466 9831	5216	22 12.6
April 2	10 39 47.07	19.37	9 23 3.3	1 53.7	1.467 5047	5802	21 56.5
6	10 39 27.70	18.06	+9 24 57.0	1 45.3	1.468 0849	6349	21 40.5
10	10 39 9.64	16.65	9 26 42.3	1 36.5	1.468 7198	6859	21 24.5
14	10 38 52.99	15.14	9 28 18.8	1 27.2	1.469 4057	7335	21 8.5
18	10 38 37.85	13.53	9 29 46.0	1 17.1	1.470 1392	7778	20 52.5
22	10 38 24.32	11.84	9 31 3.1	1 6.8	1.470 9170	8172	20 36.6
26	10 38 12.48	10.08	9 32 9.9	0 55.9	1.471 7342	8527	20 20.7
30	10 38 2.40	8.25	+9 33 5.8	0 44.9	1.472 5869	8831	20 4.8
Mai 4	10 37 54.15	6.39	9 33 50.7	0 33.5	1.473 4700	9088	19 48.9
8	10 37 47.76	4.49	9 34 24.2	0 22.0	1.474 3788	9308	19 33.1
12	10 37 43.27	2.53	9 34 46.2	0 10.6	1.475 3096	9477	19 17.3
16	10 37 40.74	0.61	9 34 56.8	0 1.2	1.476 2573	9607	19 1.5
20	10 37 40.13	1.37	9 34 55.6	0 12.8	1.477 2180	9692	18 45.8
24	10 37 41.50	3.34	+9 34 42.8	0 24.7	1.478 1872	9727	18 30.1
28	10 37 44.84	5.30	9 34 18.1	0 36.4	1.479 1599	9720	18 14.4
Juni 1	10 37 50.14	7.25	9 33 41.7	0 47.9	1.480 1319	9661	17 58.8
5	10 37 57.39	9.16	9 32 53.8	0 59.1	1.481 0980	9566	17 43.2
9	10 38 6.55	11.04	9 31 54.7	1 10.2	1.482 0546	9435	17 27.6
13	10 38 17.59		+9 30 44.5		1.482 9981		17 12.1

Neptun 1933

Tag		0h Welt-Zeit Scheinbare Rektaszension	Diff.	Scheinbare Deklination	Diff.	log Δ	Diff.	Obere Kulmination in Greenwich
1933		h m s	s	° ′ ″	′ ″			h m
Juni	13	10 38 17.59	12.88	+9 30 44.5	1 21.0	1.482 9981	9262	17 12.1
	17	10 38 30.47	14.68	9 29 23.5	1 31.6	1.483 9243	9051	16 56.6
	21	10 38 45.15	16.44	9 27 51.9	1 42.0	1.484 8294	8800	16 41.1
	25	10 39 1.59	18.13	9 26 9.9	1 51.9	1.485 7094	8509	16 25.6
	29	10 39 19.72	19.75	9 24 18.0	2 1.5	1.486 5603	8185	16 10.2
Juli	3	10 39 39.47	21.29	9 22 16.5	2 10.4	1.487 3788	7831	15 54.8
	7	10 40 0.76	22.76	+9 20 6.1	2 18.9	1.488 1619	7446	15 39.5
	11	10 40 23.52	24.15	9 17 47.2	2 27.1	1.488 9065	7037	15 24.1
	15	10 40 47.67	25.47	9 15 20.1	2 34.8	1.489 6102	6599	15 8.8
	19	10 41 13.14	26.70	9 12 45.3	2 41.9	1.490 2701	6130	14 53.5
	23	10 41 39.84	27.83	9 10 3.4	2 48.6	1.490 8831	5638	14 38.2
	27	10 42 7.67	28.86	9 7 14.8	2 54.5	1.491 4469	5119	14 23.0
	31	10 42 36.53	29.79	+9 4 20.3	2 59.7	1.491 9588	4590	14 7.7
Aug.	4	10 43 6.32	30.62	9 1 20.6	3 4.6	1.492 4178	4041	13 52.5
	8	10 43 36.94	31.34	8 58 16.0	3 8.7	1.492 8219	3477	13 37.2
	12	10 44 8.28	31.97	8 55 7.3	3 12.3	1.493 1696	2899	13 22.0
	16	10 44 40.25	32.49	8 51 55.0	3 15.1	1.493 4595	2306	13 6.8
	20	10 45 12.74	32.89	8 48 39.9	3 17.5	1.493 6901	1702	12 51.7
	24	10 45 45.63	33.18	+8 45 22.4	3 18.9	1.493 8603	1090	12 36.5
	28	10 46 18.81	33.35	8 42 3.5	3 19.7	1.493 9693	475	12 21.3
Sept.	1	10 46 52.16	33.40	8 38 43.8	3 19.8	1.494 0168	143	12 6.1
	5	10 47 25.56	33.36	8 35 24.0	3 19.2	1.494 0025	760	11 50.9
	9	10 47 58.92	33.19	8 32 4.8	3 18.0	1.493 9265	1376	11 35.8
	13	10 48 32.11	32.92	8 28 46.8	3 16.1	1.493 7889	1993	11 20.6
	17	10 49 5.03	32.52	+8 25 30.7	3 13.4	1.493 5896	2606	11 5.4
	21	10 49 37.55	32.00	8 22 17.3	3 10.0	1.493 3290	3210	10 50.2
	25	10 50 9.55	31.35	8 19 7.3	3 5.9	1.493 0080	3803	10 35.0
	29	10 50 40.90	30.61	8 16 1.4	3 0.9	1.492 6277	4379	10 19.8
Okt.	3	10 51 11.51	29.76	8 13 0.5	2 55.5	1.492 1898	4942	10 4.6
	7	10 51 41.27	28.80	8 10 5.0	2 49.5	1.491 6956	5486	9 49.4
	11	10 52 10.07	27.74	+8 7 15.5	2 42.6	1.491 1470	6013	9 34.1
	15	10 52 37.81	26.55	8 4 32.9	2 35.3	1.490 5457	6520	9 18.8
	19	10 53 4.36	25.28	8 1 57.6	2 27.1	1.489 8937	7003	9 3.5
	23	10 53 29.64	23.87	7 59 30.5	2 18.3	1.489 1934	7457	8 48.2
	27	10 53 53.51	22.42	7 57 12.2	2 9.0	1.488 4477	7872	8 32.9
	31	10 54 15.93	20.85	7 55 3.2	1 59.3	1.487 6605	8261	8 17.6
Nov.	4	10 54 36.78	19.21	+7 53 3.9	1 49.0	1.486 8344	8615	8 2.2
	8	10 54 55.99	17.50	7 51 14.9	1 38.2	1.485 9729	8938	7 46.8
	12	10 55 13.49	15.71	7 49 36.7	1 27.1	1.485 0791	9220	7 31.3
	16	10 55 29.20	13.86	7 48 9.6	1 15.4	1.484 1571	9461	7 15.8
	20	10 55 43.06	11.92	7 46 54.2	1 3.4	1.483 2110	9657	7 0.3
	24	10 55 54.98		+7 45 50.8		1.482 2453		6 44.8

Tag	0h Welt-Zeit						Obere Kulmination in Greenwich
	Scheinbare Rektaszension		Scheinbare Deklination		log Δ		
1933	h m s	s	° ′ ″	″			h m
Nov. 24	10 55 54.98	9.96	+7 45 50.8	51.1	1.482 2453	9807	6 44.8
28	10 56 4.94	7.97	7 44 59.7	38.9	1.481 2646	9910	6 29.3
Dez. 2	10 56 12.91	5.94	7 44 20.8	26.3	1.480 2736	9966	6 13.7
6	10 56 18.85	3.91	7 43 54.5	13.7	1.479 2770	9979	5 58.0
10	10 56 22.76	1.84	7 43 40.8	1.0	1.478 2791	9942	5 42.4
14	10 56 24.60	0.23	7 43 39.8	11.7	1.477 2849	9858	5 26.7
18	10 56 24.37	2.29	+7 43 51.5	24.3	1.476 2991	9715	5 10.9
22	10 56 22.08	4.31	7 44 15.8	36.6	1.475 3276	9520	4 55.2
26	10 56 17.77	6.29	7 44 52.4	48.7	1.474 3756	9279	4 39.4
30	10 56 11.48	8.23	7 45 41.1	60.4	1.473 4477	8985	4 23.5
34	10 56 3.25		+7 46 41.5		1.472 5492		4 7.7



0h Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Jan. 0	+0.154 061	+17 253	−49	+3	−0.890 966	+2 670	+278	0	−0.386 444	+1 158	+120	−2
1	0.171 314	17 198	55	+1	0.888 296	2 946	276	−2	0.385 286	1 279	121	+4
2	0.188 512	17 138	60	+2	0.885 350	3 223	277	+4	0.384 007	1 399	120	+2
3	0.205 650	17 072	66	0	0.882 127	3 497	274	0	0.382 608	1 517	118	−5
4	0.222 722	17 001	71	+1	0.878 630	3 770	273	0	0.381 091	1 636	119	−3
5	0.239 723	16 926	75	+5	0.874 860	4 042	272	0	0.379 455	1 753	117	−5
6	+0.256 649	+16 844	−82	0	−0.870 818	+4 312	+270	−4	−0.377 702	+1 870	+117	0
7	0.273 493	16 759	85	+4	0.866 506	4 580	268	−4	0.375 832	1 987	117	+4
8	0.290 252	16 667	92	−1	0.861 926	4 848	268	+4	0.373 845	2 103	116	+4
9	0.306 919	16 572	95	+4	0.857 078	5 113	265	+1	0.371 742	2 217	114	−1
10	0.323 491	16 471	101	+1	0.851 965	5 377	264	+3	0.369 525	2 332	115	+4
11	0.339 962	16 366	105	+1	0.846 588	5 639	262	+4	0.367 193	2 446	114	+3
12	+0.356 328	+16 255	−111	−5	−0.840 949	+5 900	+261	+5	−0.364 747	+2 558	+112	−3
13	0.372 583	16 140	115	−3	0.835 049	6 158	258	−1	0.362 189	2 670	112	−1
14	0.388 723	16 020	120	−1	0.828 891	6 414	256	−3	0.359 519	2 782	112	+2
15	0.404 743	15 897	123	+3	0.822 477	6 670	256	+4	0.356 737	2 892	110	−2
16	0.420 640	15 767	130	−5	0.815 807	6 923	253	+1	0.353 845	3 002	110	0
17	0.436 407	15 633	134	−4	0.808 884	7 174	251	+1	0.350 843	3 111	109	−1
18	+0.452 040	+15 494	−139	−3	−0.801 710	+7 424	+250	+4	−0.347 732	+3 219	+108	+1
19	0.467 534	15 351	143	0	0.794 286	7 671	247	0	0.344 513	3 327	108	+4
20	0.482 885	15 202	149	−4	0.786 615	7 916	245	−1	0.341 186	3 433	106	+2
21	0.498 087	15 048	154	−4	0.778 699	8 159	243	+1	0.337 753	3 539	106	+5
22	0.513 135	14 890	158	0	0.770 540	8 400	241	+4	0.334 214	3 644	105	+3
23	0.528 025	14 726	164	−1	0.762 140	8 638	238	+2	0.330 570	3 746	102	−4
24	+0.542 751	+14 558	−168	+3	−0.753 502	+8 873	+235	0	−0.326 824	+3 849	+103	+3
25	0.557 309	14 385	173	+1	0.744 629	9 105	232	+1	0.322 975	3 950	101	+3
26	0.571 694	14 206	179	−5	0.735 524	9 335	230	+5	0.319 025	4 050	100	+1
27	0.585 900	14 023	183	−4	0.726 189	9 561	226	+1	0.314 975	4 147	97	−4
28	0.599 923	13 836	187	0	0.716 628	9 783	222	−2	0.310 828	4 244	97	0
29	0.613 759	13 644	192	0	0.706 845	10 003	220	+1	0.306 584	4 339	95	+1
30	+0.627 403	+13 449	−195	+4	−0.696 842	+10 218	+215	−4	−0.302 245	+4 433	+94	+3
31	0.640 852	13 249	200	0	0.686 624	10 430	212	−2	0.297 812	4 524	91	−2
Febr. 1	0.654 101	13 045	204	−1	0.676 194	10 639	209	+1	0.293 288	4 615	91	+2
2	0.667 146	12 838	207	+2	0.665 555	10 844	205	−2	0.288 673	4 704	89	0
3	0.679 984	12 627	211	+2	0.654 711	11 045	201	−5	0.283 969	4 790	86	−4
4	0.692 611	12 412	215	0	0.643 666	11 242	197	−4	0.279 179	4 877	87	+4
5	+0.705 023	+12 194	−218	+2	−0.632 424	+11 437	+195	+4	−0.274 302	+4 960	+83	−4
6	0.717 217	11 973	221	+3	0.620 987	11 627	190	0	0.269 342	5 043	83	−1
7	0.729 190	11 748	225	+1	0.609 360	11 813	186	−1	0.264 299	5 123	80	−4
8	0.740 938	11 520	228	+1	0.597 547	11 997	184	+4	0.259 176	5 203	80	+1
9	0.752 458	+11 289	231	+3	0.585 550	+12 175	178	−2	0.253 973	+5 280	77	−2
10	+0.763 747		−233	+5	−0.573 375		+176	+3	−0.248 693		+76	+2

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0^h Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Febr. 10	+0.763 747	+11 056	−233	+5	−0.573 375	+12 351	+176	+3	−0.248 693	+5 356	+76	+2
11	0.774 803	10 818	238	−2	0.561 024	12 523	172	+2	0.243 337	5 431	75	+5
12	0.785 621	10 578	240	0	0.548 501	12 691	168	0	0.237 906	5 504	73	+4
13	0.796 199	10 335	243	+3	0.535 810	12 855	164	−1	0.232 402	5 575	71	+2
14	0.806 534	10 090	245	+5	0.522 955	13 017	162	+3	0.226 827	5 645	70	+4
15	0.816 624	9 840	250	−2	0.509 938	13 173	156	−4	0.221 182	5 714	69	+4
16	+0.826 464	+9 588	−252	−1	−0.496 765	+13 327	+154	0	−0.215 468	+5 780	66	−3
17	0.836 052	9 333	255	0	0.483 438	13 476	149	−4	0.209 688	5 845	65	−3
18	0.845 385	9 074	259	−3	0.469 962	13 621	145	−3	0.203 843	5 908	63	−4
19	0.854 459	8 814	260	+3	0.456 341	13 763	142	+2	0.197 935	5 969	61	−3
20	0.863 273	8 549	265	−2	0.442 578	13 900	137	0	0.191 966	6 029	60	+2
21	0.871 822	8 282	267	−1	0.428 678	14 032	132	−5	0.185 937	6 087	58	+4
22	+0.880 104	+8 012	−270	0	−0.414 646	+14 160	+128	−3	−0.179 850	+6 142	55	+1
23	0.888 116	7 740	272	+4	0.400 486	14 283	123	−1	0.173 708	6 196	54	+4
24	0.895 856	7 466	274	+4	0.386 203	14 403	120	+4	0.167 512	6 248	52	+3
25	0.903 322	7 188	278	−4	0.371 800	14 516	113	−4	0.161 264	6 297	49	−2
26	0.910 510	6 909	279	−1	0.357 284	14 625	109	−3	0.154 967	6 344	47	−4
27	0.917 419	6 628	281	+1	0.342 659	14 729	104	−2	0.148 623	6 389	45	−3
28	+0.924 047	+6 346	−282	+4	−0.327 930	+14 829	+100	0	−0.142 234	+6 432	43	−3
März 1	0.930 393	6 062	284	+3	0.313 101	14 923	94	−5	0.135 802	6 473	41	−2
2	0.936 455	5 776	286	−1	0.298 178	15 013	90	−3	0.129 329	6 512	39	−2
3	0.942 231	5 489	287	−2	0.283 165	15 097	84	−5	0.122 817	6 548	36	−5
4	0.947 720	5 201	288	0	0.268 068	15 178	81	0	0.116 269	6 583	35	0
5	0.952 921	4 912	289	+2	0.252 890	15 253	75	−2	0.109 686	6 616	33	−1
6	+0.957 833	+4 622	−290	+1	−0.237 637	+15 324	+71	0	−0.103 070	+6 646	30	−5
7	0.962 455	4 331	291	+1	0.222 313	15 389	65	−2	0.096 424	6 674	28	−4
8	0.966 786	4 039	292	+2	0.206 924	15 451	62	+4	0.089 750	6 701	27	+2
9	0.970 825	3 747	292	+4	0.191 473	15 508	57	+5	0.083 049	6 726	25	+2
10	0.974 572	3 454	293	+1	0.175 965	15 560	52	+3	0.076 323	6 748	22	−3
11	0.978 026	3 160	294	+1	0.160 405	15 608	48	+1	0.069 575	6 769	21	0
12	+0.981 186	+2 867	−293	+5	−0.144 797	+15 651	+43	−2	−0.062 806	+6 788	19	−1
13	0.984 053	2 572	295	−1	0.129 146	15 690	39	0	0.056 018	6 804	16	−3
14	0.986 625	2 276	296	−4	0.113 456	15 725	35	+1	0.049 214	6 820	16	+4
15	0.988 901	1 981	295	+1	0.097 731	15 755	30	−3	0.042 394	6 833	13	+3
16	0.990 882	1 684	297	−3	0.081 976	15 781	26	−3	0.035 561	6 845	12	+5
17	0.992 566	1 387	297	−2	0.066 195	15 802	21	−5	0.028 716	6 854	9	0
18	+0.993 953	+1 089	−298	−3	−0.050 393	+15 818	+16	−5	−0.021 862	+6 861	7	−3
19	0.995 042	791	298	−1	0.034 575	15 830	12	0	0.015 001	6 867	6	−1
20	0.995 833	492	299	0	0.018 745	15 838	8	+4	0.008 134	6 869	2	−4
21	0.996 325	+194	298	+4	−0.002 907	15 840	+2	0	−0.001 265	6 871	+2	+4
22	0.996 519	−106	300	−1	+0.012 933	+15 837	−3	−2	+0.005 606	+6 870	−1	+2
23	+0.996 413		−298	+5	+0.028 770		−8	−1	+0.012 476		−4	−1

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0ʰ Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
März 23	+0.996 413	−404	−298	+5	+0.028 770	+15 829	−8	−1	+0.012 476	+6866	−4	−1
24	0.996 009	703	299	+3	0.044 599	15 817	12	+4	0.019 342	6861	5	+4
25	0.995 306	1 001	298	+3	0.060 416	15 799	18	+1	0.026 203	6853	8	+4
26	0.994 305	1 299	298	0	0.076 215	15 776	23	0	0.033 056	6844	9	+5
27	0.993 006	1 596	297	−1	0.091 991	15 749	27	+1	0.039 900	6831	13	−3
28	0.991 410	1 893	297	−2	0.107 740	15 715	34	−4	0.046 731	6817	14	−1
29	+0.989 517	−2 187	−294	+4	+0.123 455	+15 679	−36	+3	+0.053 548	+6800	−17	−3
30	0.987 330	2 482	295	−2	0.139 134	15 636	43	−4	0.060 348	6782	18	+1
31	0.984 848	2 774	292	+2	0.154 770	15 588	48	−5	0.067 130	6761	21	+1
April 1	0.982 074	3 066	292	−1	0.170 358	15 537	51	+3	0.073 891	6739	22	+5
2	0.979 008	3 355	289	+3	0.185 895	15 481	56	+4	0.080 630	6714	25	+3
3	0.975 653	3 644	289	−3	0.201 376	15 420	61	+1	0.087 344	6688	26	+5
4	+0.972 009	−3 931	−287	−3	+0.216 796	+15 354	−66	−2	+0.094 032	+6659	−29	0
5	0.968 078	4 216	285	−2	0.232 150	15 285	69	+2	0.100 691	6629	30	+2
6	0.963 862	4 499	283	−1	0.247 435	15 211	74	0	0.107 320	6597	32	+1
7	0.959 363	4 781	282	−2	0.262 646	15 132	79	−4	0.113 917	6563	34	−1
8	0.954 582	5 060	279	+1	0.277 778	15 050	82	0	0.120 480	6527	36	−4
9	0.949 522	5 338	278	−1	0.292 828	14 964	86	+1	0.127 007	6489	38	−4
10	+0.944 184	−5 614	−276	+1	+0.307 792	+14 874	−90	0	+0.133 496	+6451	−38	+4
11	0.938 570	5 888	274	+4	0.322 666	14 779	95	−3	0.139 947	6410	41	+2
12	0.932 682	6 160	272	+4	0.337 445	14 682	97	+3	0.146 357	6368	42	+2
13	0.926 522	6 431	271	−1	0.352 127	14 579	103	−1	0.152 725	6323	45	−1
14	0.920 091	6 701	270	−4	0.366 706	14 474	105	+4	0.159 048	6278	45	+5
15	0.913 390	6 968	267	+1	0.381 180	14 364	110	+1	0.165 326	6231	47	+3
16	+0.906 422	−7 233	−265	+3	+0.395 544	+14 249	−115	−3	+0.171 557	+6181	−50	−4
17	0.899 189	7 497	264	+1	0.409 793	14 131	118	+1	0.177 738	6129	52	−4
18	0.891 692	7 758	261	+3	0.423 924	14 008	123	0	0.183 867	6077	52	+2
19	0.883 934	8 018	260	−2	0.437 932	13 882	126	+3	0.189 944	6021	56	−3
20	0.875 916	8 274	256	+1	0.451 814	13 750	132	−1	0.195 965	5965	56	+2
21	0.867 642	8 529	255	−3	0.465 564	13 615	135	+3	0.201 930	5906	59	−1
22	+0.859 113	−8 781	−252	−2	+0.479 179	+13 476	−139	+4	+0.207 836	+5845	−61	0
23	0.850 332	9 029	248	+3	0.492 655	13 332	144	−1	0.213 681	5783	62	+4
24	0.841 303	9 276	247	−1	0.505 987	13 184	148	0	0.219 464	5719	64	+5
25	0.832 027	9 518	242	+5	0.519 171	13 033	151	+4	0.225 183	5653	66	+4
26	0.822 509	9 758	240	+2	0.532 204	12 878	155	+1	0.230 836	5586	67	+5
27	0.812 751	9 994	236	+3	0.545 082	12 718	160	−5	0.236 422	5516	70	0
28	+0.802 757	−10 227	−233	0	+0.557 800	+12 555	−163	−3	+0.241 938	+5446	−70	+4
29	0.792 530	10 457	230	−3	0.570 355	12 389	166	0	0.247 384	5373	73	−1
30	0.782 073	10 683	226	−3	0.582 744	12 219	170	−2	0.252 757	5300	73	+1
Mai 1	0.771 390	10 906	223	−4	0.594 963	12 046	173	−2	0.258 057	5224	76	−5
2	0.760 484	−11 124	218	0	0.607 009	+11 869	177	−4	0.263 281	+5147	77	−3
3	+0.749 360		−216	−5	+0.618 878		−180	−3	+0.268 428		−78	+1

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X	Diff.	Diff.	ΔX*)	Y	Diff.	Diff.	ΔY*)	Z	Diff.	Diff.	ΔZ*)
1933 Mai 3	+0.749 360	−11 340	−216	−5	+0.618 878	+11 689	−180	−3	+0.268 428	+5 069	−78	+1
4	0.738 020	11 552	212	−4	0.630 567	11 507	182	0	0.273 497	4 991	78	+4
5	0.726 468	11 759	207	+2	0.642 074	11 321	186	−2	0.278 488	4 909	82	−4
6	0.714 709	11 963	204	−1	0.653 395	11 132	189	−2	0.283 397	4 828	81	+3
7	0.702 746	12 164	201	−5	0.664 527	10 942	190	+2	0.288 225	4 745	83	+3
8	0.690 582	12 361	197	−3	0.675 469	10 747	195	−4	0.292 970	4 661	84	+4
9	+0.678 221	−12 555	−194	−2	+0.686 216	+10 552	−195	+3	+0.297 631	+4 577	−84	+5
10	0.665 666	12 744	189	+4	0.696 768	10 352	200	−4	0.302 208	4 490	87	−2
11	0.652 922	12 931	187	0	0.707 120	10 151	201	0	0.306 698	4 403	87	−1
12	0.639 991	13 114	183	+1	0.717 271	9 946	205	−1	0.311 101	4 314	89	−2
13	0.626 877	13 294	180	−2	0.727 217	9 740	206	+5	0.315 415	4 225	89	+3
14	0.613 583	13 471	177	−5	0.736 957	9 530	210	+4	0.319 640	4 134	91	+2
15	+0.600 112	−13 644	−173	−2	+0.746 487	+ 9 318	−212	+5	+0.323 774	+4 042	−92	+4
16	0.586 468	13 812	168	+4	0.755 805	9 103	215	+2	0.327 816	3 949	93	+5
17	0.572 656	13 978	166	−1	0.764 908	8 884	219	−1	0.331 765	3 854	95	+3
18	0.558 678	14 139	161	+1	0.773 792	8 664	220	+5	0.335 619	3 759	95	+4
19	0.544 539	14 296	157	+2	0.782 456	8 441	223	+3	0.339 378	3 662	97	−1
20	0.530 243	14 449	153	+2	0.790 897	8 214	227	−2	0.343 040	3 563	99	−5
21	+0.515 794	−14 597	−148	+4	+0.799 111	+ 7 986	−228	+3	+0.346 603	+3 464	−99	−1
22	0.501 197	14 741	144	0	0.807 097	7 756	230	+5	0.350 067	3 364	100	+2
23	0.486 456	14 882	141	−4	0.814 853	7 522	234	−1	0.353 431	3 263	101	+2
24	0.471 574	15 016	134	+4	0.822 375	7 287	235	+1	0.356 694	3 161	102	+1
25	0.456 558	15 146	130	+3	0.829 662	7 050	237	+1	0.359 855	3 057	104	−2
26	0.441 412	15 273	127	−2	0.836 712	6 810	240	−2	0.362 912	2 954	103	+3
27	+0.426 139	−15 393	−120	+3	+0.843 522	+ 6 569	−241	+2	+0.365 866	+2 849	−105	−1
28	0.410 746	15 510	117	−2	0.850 091	6 327	242	+4	0.368 715	2 743	106	−2
29	0.395 236	15 622	112	−2	0.856.418	6 081	246	−4	0.371 458	2 638	105	+3
30	0.379 614	15 728	106	+3	0.862 499	5 836	245	+4	0.374 096	2 530	108	−3
31	0.363 886	15 830	102	0	0.868 335	5 589	247	+5	0.376 626	2 423	107	+3
Juni 1	0.348 056	15 928	98	−3	0.873 924	5 340	249	+1	0.379 049	2 316	107	+5
2	+0.332 128	−16 020	− 92	+1	+0.879 264	+ 5 090	−250	+1	+0.381 365	+2 207	−109	−1
3	0.316 108	16 108	88	−1	0.884 354	4 840	250	+4	0.383 572	2 099	108	+2
4	0.300 000	16 191	83	0	0.889 194	4 588	252	+1	0.385 671	1 990	109	−1
5	0.283 809	16 270	79	−3	0.893 782	4 336	252	+3	0.387 661	1 880	110	−5
6	0.267 539	16 345	75	−5	0.898 118	4 083	253	+1	0.389 541	1 770	110	−3
7	0.251 194	16 415	70	−1	0.902 201	3 828	255	−3	0.391 311	1 661	109	+4
8	+0.234 779	−16 480	− 65	+4	+0.906 029	+ 3 574	−254	+4	+0.392 972	+1 551	−110	+2
9	0.218 299	16 542	62	0	0.909 603	3 319	255	+4	0.394 523	1 439	112	−3
10	0.201 757	16 600	58	−3	0.912 922	3 062	257	−2	0.395 962	1 329	110	+4
11	0.185 157	16 653	53	−1	0.915 984	2 804	258	−2	0.397 291	1 217	112	+1
12	0.168 504	−16 702	49	0	0.918 788	+ 2 546	258	+3	0.398 508	+1 105	112	+4
13	+0.151 802		− 44	+3	+0.921 334		−259	+5	+0.399 613		−112	+5

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Juni 13	+0.151 802	−16746	− 44	+3	+0.921 334	+2287	−259	+5	+0.399 613	+ 993	−112	+5
14	0.135 056	16785	39	+3	0.923 621	2027	260	+1	0.400 606	880	113	0
15	0.118 271	16821	36	−4	0.925 648	1765	262	−4	0.401 486	766	114	−2
16	0.101 450	16851	30	−2	0.927 413	1504	261	+2	0.402 252	653	113	+2
17	0.084 599	16876	25	−1	0.928 917	1241	263	−1	0.402 905	539	114	0
18	0.067 723	16897	21	−3	0.930 158	978	263	+1	0.403 444	424	115	−1
19	+0.050 826	−16912	− 15	+1	+0.931 136	+ 715	−263	+3	+0.403 868	+ 310	−114	+4
20	0.033 914	16922	10	+2	0.931 851	451	264	+2	0.404 178	196	114	+5
21	0.016 992	16928	− 6	−3	0.932 302	+ 187	264	+2	0.404 374	+ 81	115	+2
22	+0.000 064	16928	0	0	0.932 489	− 77	264	+2	0.404 455	− 33	114	+2
23	−0.016 864	16924	+ 4	−1	0.932 412	341	264	+2	0.404 422	149	116	−4
24	0.033 788	16913	11	+4	0.932 071	604	263	+4	0.404 273	262	113	+4
25	−0.050 701	−16899	+ 14	−1	+0.931 467	− 869	−265	−3	+0.404 011	− 377	−115	−3
26	0.067 600	16879	20	+1	0.930 598	1131	262	+4	0.403 634	492	115	−5
27	0.084 479	16853	26	+4	0.929 467	1394	263	−3	0.403 142	606	114	−2
28	0.101 332	16824	29	−4	0.928 073	1657	263	−5	0.402 536	719	113	+3
29	0.118 156	16789	35	−4	0.926 416	1918	261	+2	0.401 817	832	113	+4
30	0.134 945	16750	39	−4	0.924 498	2178	260	+5	0.400 985	945	113	+2
Juli 1	−0.151 695	−16705	+ 45	+3	+0.922 320	−2437	−259	+5	+0.400 040	−1058	−113	−1
2	0.168 400	16656	49	+3	0.919 883	2696	259	+1	0.398 982	1169	111	+2
3	0.185 056	16602	54	+1	0.917 187	2953	257	+4	0.397 813	1281	112	−4
4	0.201 658	16545	57	−5	0.914 234	3209	256	+3	0.396 532	1392	111	−4
5	0.218 203	16483	62	0	0.911 025	3464	255	0	0.395 140	1503	111	−2
6	0.234 686	16416	67	+5	0.907 561	3718	254	−3	0.393 637	1612	109	+5
7	−0.251 102	−16346	+ 70	+3	+0.903 843	−3971	−253	−4	+0.392 025	−1722	−110	+3
8	0.267 448	16271	75	+5	0.899 872	4223	252	−4	0.390 303	1830	108	+5
9	0.283 719	16192	79	+4	0.895 649	4474	251	−2	0.388 473	1940	110	−4
10	0.299 911	16109	83	+1	0.891 175	4724	250	+1	0.386 533	2048	108	−1
11	0.316 020	16022	87	−1	0.886 451	4972	248	+4	0.384 485	2156	108	−2
12	0.332 042	15930	92	+1	0.881 479	5221	249	−4	0.382 329	2264	108	−1
13	−0.347 972	−15833	+ 97	+1	+0.876 258	−5467	−246	+1	+0.380 065	−2371	−107	+2
14	0.363 805	15733	100	−3	0.870 791	5713	246	−3	0.377 694	2477	106	+4
15	0.379 538	15627	106	+1	0.865 078	5958	245	−5	0.375 217	2584	107	−1
16	0.395 165	15517	110	+1	0.859 120	6200	242	−1	0.372 633	2689	105	+3
17	0.410 682	15402	115	+2	0.852 920	6442	242	−4	0.369 944	2794	105	0
18	0.426 084	15282	120	+2	0.846 478	6682	240	−3	0.367 150	2898	104	0
19	−0.441 366	−15159	+123	−3	+0.839 796	−6920	−238	−1	+0.364 252	−3002	−104	0
20	0.456 525	15030	129	+3	0.832 876	7156	236	+2	0.361 250	3104	102	+5
21	0.471 555	14896	134	+5	0.825 720	7390	234	+5	0.358 146	3206	102	+3
22	0.486 451	14759	137	0	0.818 330	7622	232	+5	0.354 940	3306	100	+4
23	0.501 210	−14616	143	+1	0.810 708	−7852	230	+4	0.351 634	−3406	100	0
24	−0.515 826		+146	−4	+0.802 856		−227	+3	+0.348 228		− 99	−3

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0^h Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Juli 24	−0.515 826	−14 470	+146	−4	+0.802 856	−8 079	−227	+3	+0.348 228	−3 505	−99	−3
25	0.530 296	14 319	151	−2	0.794 777	8 305	226	−4	0.344 723	3 603	98	−5
26	0.544 615	14 163	156	0	0.786 472	8 528	223	−4	0.341 120	3 700	97	−2
27	0.558 778	14 004	159	−3	0.777 944	8 747	219	0	0.337 420	3 794	94	+4
28	0.572 782	13 841	163	−2	0.769 197	8 965	218	−4	0.333 626	3 889	95	−4
29	0.586 623	13 673	168	+4	0.760 232	9 179	214	−2	0.329 737	3 982	93	−1
30	−0.600 296	−13 501	+172	+5	+0.751 053	−9 391	−212	−5	+0.325 755	−4 073	−91	+2
31	0.613 797	13 327	174	−2	0.741 662	9 600	209	−3	0.321 682	4 164	91	−1
Aug. 1	0.627 124	13 149	178	0	0.732 062	9 805	205	+1	0.317 518	4 253	89	+2
2	0.640 273	12 967	182	+4	0.722 257	10 009	204	−4	0.313 265	4 340	87	+4
3	0.653 240	12 781	186	+5	0.712 248	10 209	200	+2	0.308 925	4 427	87	−2
4	0.666 021	12 594	187	−2	0.702 039	10 406	197	+5	0.304 498	4 513	86	−5
5	−0.678 615	−12 402	+192	+3	+0.691 633	−10 600	−194	+5	+0.299 985	−4 597	−84	−3
6	0.691 017	12 207	195	+3	0.681 033	10 793	193	−1	0.295 388	4 681	84	−5
7	0.703 224	12 009	198	0	0.670 240	10 982	189	+2	0.290 707	4 762	81	+2
8	0.715 233	11 808	201	−2	0.659 258	11 169	187	0	0.285 945	4 844	82	−3
9	0.727 041	11 603	205	0	0.648 089	11 352	183	+2	0.281 101	4 923	79	+2
10	0.738 644	11 395	208	+1	0.636 737	11 534	182	−5	0.276 178	5 002	79	−2
11	−0.750 039	−11 183	+212	+4	+0.625 203	−11 713	−179	−3	+0.271 176	−5 080	−78	−4
12	0.761 222	10 967	216	+5	0.613 490	11 887	174	+4	0.266 096	5 156	76	−1
13	0.772 189	10 749	218	−1	0.601 603	12 060	173	−2	0.260 940	5 231	75	0
14	0.782 938	10 527	222	0	0.589 543	12 229	169	0	0.255 709	5 304	73	+4
15	0.793 465	10 301	226	+4	0.577 314	12 394	165	+3	0.250 405	5 376	72	+3
16	0.803 766	10 072	229	+4	0.564 920	12 557	163	−3	0.245 029	5 446	70	+2
17	−0.813 838	−9 839	+233	+3	+0.552 363	−12 716	−159	−2	+0.239 583	−5 516	−70	−4
18	0.823 677	9 605	234	−4	0.539 647	12 871	155	+1	0.234 067	5 583	67	−1
19	0.833 282	9 365	240	+3	0.526 776	13 022	151	+3	0.228 484	5 649	66	−2
20	0.842 647	9 124	241	−3	0.513 754	13 171	149	−3	0.222 835	5 713	64	−2
21	0.851 771	8 879	245	−1	0.500 583	13 314	143	+3	0.217 122	5 776	63	−4
22	0.860 650	8 631	248	−1	0.487 269	13 454	140	−2	0.211 346	5 836	60	+1
23	−0.869 281	−8 381	+250	−4	+0.473 815	−13 590	−136	−5	+0.205 510	−5 895	−59	−1
24	0.877 662	8 128	253	−4	0.460 225	13 722	132	−5	0.199 615	5 952	57	−3
25	0.885 790	7 873	255	−3	0.446 503	13 850	128	−4	0.193 663	6 008	56	−5
26	0.893 663	7 614	259	+4	0.432 653	13 973	123	0	0.187 655	6 061	53	+2
27	0.901 277	7 355	259	−2	0.418 680	14 092	119	+2	0.181 594	6 112	51	+5
28	0.908 632	7 093	262	0	0.404 588	14 207	115	+3	0.175 482	6 162	50	+3
29	−0.915 725	−6 829	+264	+2	+0.390 381	−14 317	−110	+4	+0.169 320	−6 209	−47	+5
30	0.922 554	6 564	265	0	0.376 064	14 424	107	−3	0.163 111	6 256	47	−2
31	0.929 118	6 297	267	+2	0.361 640	14 527	103	−4	0.156 855	6 300	44	+1
Sept. 1	0.935 415	6 028	269	+5	0.347 113	14 625	98	0	0.150 555	6 343	43	0
2	0.941 443	−5 757	271	+5	0.332 488	−14 720	95	−4	0.144 212	−6 384	41	+2
3	−0.947 200		+271	−2	+0.317 768		−91	−4	+0.137 828		−39	+5

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0h Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Sept. 3	−0.947 200	−5 486	+271	−2	+0.317 768	−14 811	−91	−4	+0.137 828	−6 423	−39	+5
4	0.952 686	5 213	273	0	0.302 957	14 897	86	+1	0.131 405	6 460	37	+4
5	0.957 899	4 937	276	+4	0.288 060	14 980	83	−1	0.124 945	6 497	37	−4
6	0.962 836	4 661	276	0	0.273 080	15 060	80	−4	0.118 448	6 531	34	−3
7	0.967 497	4 383	278	+1	0.258 020	15 134	74	+2	0.111 917	6 564	33	−5
8	0.971 880	4 102	281	+5	0.242 886	15 206	72	−3	0.105 353	6 595	31	−3
9	−0.975 982	−3 821	+281	+1	+0.227 680	−15 272	−66	+1	+0.098 758	−6 624	−29	−2
10	0.979 803	3 537	284	+4	0.212 408	15 335	63	−3	0.092 134	6 652	28	−3
11	0.983 340	3 253	284	−1	0.197 073	15 394	59	−4	0.085 482	6 677	25	+4
12	0.986 593	2 966	287	+2	0.181 679	15 447	53	+1	0.078 805	6 700	23	+5
13	0.989 559	2 679	287	−3	0.166 232	15 498	51	−4	0.072 105	6 722	22	+1
14	0.992 238	2 390	289	−1	0.150 734	15 542	44	+4	0.065 383	6 742	20	0
15	−0.994 628	−2 100	+290	0	+0.135 192	−15 583	−41	+2	+0.058 641	−6 759	−17	+3
16	0.996 728	1 808	292	+4	0.119 609	15 619	36	+3	0.051 882	6 775	16	−1
17	0.998 536	1 516	292	0	0.103 990	15 650	31	+4	0.045 107	6 789	14	−2
18	1.000 052	1 223	293	−1	0.088 340	15 676	26	+4	0.038 318	6 800	11	+2
19	1.001 275	929	294	+1	0.072 664	15 698	22	−1	0.031 518	6 809	9	0
20	1.002 204	634	295	+3	0.056 966	15 715	17	−3	0.024 709	6 817	8	−5
21	−1.002 838	− 339	+295	+1	+0.041 251	−15 727	−12	−2	+0.017 892	−6 822	− 5	−1
22	1.003 177	− 44	295	−2	0.025 524	15 733	6	+2	0.011 070	6 824	2	+4
23	1.003 221	+ 251	295	−2	+0.009 791	15 735	− 2	−2	+0.004 246	6 825	− 1	+1
24	1.002 970	547	296	+2	−0.005 944	15 732	+ 3	−3	−0.002 579	6 823	+ 2	+1
25	1.002 423	841	294	−4	0.021 676	15 725	7	−5	0.009 402	6 820	3	−4
26	1.001 582	1 136	295	0	0.037 401	15 712	13	+1	0.016 222	6 815	5	−4
27	−1.000 446	+1 429	+293	−3	−0.053 113	−15 694	+18	+3	−0.023 037	−6 807	+ 8	+2
28	0.999 017	1 723	294	+3	0.068 807	15 673	21	−4	0.029 844	6 797	10	+5
29	0.997 294	2 016	293	+3	0.084 480	15 647	26	−4	0.036 641	6 786	11	+1
30	0.995 278	2 308	292	+1	0.100 127	15 617	30	−3	0.043 427	6 772	14	+2
Okt. 1	0.992 970	2 599	291	−1	0.115 744	15 581	36	+4	0.050 199	6 758	14	−4
2	0.990 371	2 890	291	+1	0.131 325	15 542	39	0	0.056 957	6 741	17	+1
3	−0.987 481	+3 181	+291	+3	−0.146 867	−15 499	+43	−2	−0.063 698	−6 721	+20	+5
4	0.984 300	3 470	289	−3	0.162 366	15 451	48	0	0.070 419	6 701	20	−3
5	0.980 830	3 759	289	−4	0.177 817	15 399	52	−2	0.077 120	6 679	22	−5
6	0.977 071	4 047	288	−5	0.193 216	15 343	56	−2	0.083 799	6 655	24	−3
7	0.973 024	4 335	288	−2	0.208 559	15 282	61	+1	0.090 454	6 628	27	+3
8	0.968 689	4 622	287	−3	0.223 841	15 216	66	+2	0.097 082	6 600	28	0
9	−0.964 067	+4 907	+285	−5	−0.239 057	−15 147	+69	−4	−0.103 682	−6 570	+30	−1
10	0.959 160	5 193	286	+3	0.254 204	15 073	74	−3	0.110 252	6 538	32	−1
11	0.953 967	5 478	285	+3	0.269 277	14 993	80	+2	0.116 790	6 504	34	+1
12	0.948 489	5 760	282	−4	0.284 270	14 911	82	−4	0.123 294	6 468	36	+3
13	0.942 729	+6 042	282	−1	0.299 181	−14 822	89	+3	0.129 762	−6 429	39	+5
14	−0.936 687		+280	−1	−0.314 003		+92	−1	−0.136 191		+40	−1

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0^h Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Okt. 14	−0.936 687	+ 6322	+280	−1	−0.314 003	−14730	+ 92	−1	−0.136 191	−6389	+ 40	−1
15	0.930 365	6602	280	+5	0.328 733	14632	98	+3	0.142 580	6347	42	−4
16	0.923 763	6880	278	+2	0.343 365	14530	102	+1	0.148 927	6303	44	−5
17	0.916 883	7155	275	−5	0.357 895	14423	107	+1	0.155 230	6257	46	−3
18	0.909 728	7429	274	−2	0.372 318	14312	111	−1	0.161 487	6208	49	+3
19	0.902 299	7702	273	+2	0.386 630	14195	117	+3	0.167 695	6157	51	+5
20	−0.894 597	+ 7971	+269	−4	−0.400 825	−14074	+121	+1	−0.173 852	−6105	+ 52	+2
21	0.886 626	8238	267	−4	0.414 899	13948	126	−1	0.179 957	6049	56	+5
22	0.878 388	8503	265	−1	0.428 847	13818	130	−4	0.186 006	5993	56	−3
23	0.869 885	8764	261	−4	0.442 665	13684	134	−3	0.191 999	5935	58	−4
24	0.861 121	9024	260	+2	0.456 349	13544	140	+3	0.197 934	5874	61	−1
25	0.852 097	9280	256	−2	0.469 893	13402	142	−3	0.203 808	5813	61	−4
26	−0.842 817	+ 9532	+252	−5	−0.483 295	−13254	+148	+2	−0.209 621	−5748	+ 65	+4
27	0.833 285	9783	251	0	0.496 549	13104	150	−4	0.215 369	5683	65	+2
28	0.823 502	10030	247	−2	0.509 653	12949	155	−1	0.221 052	5616	67	+3
29	0.813 472	10274	244	−3	0.522 602	12791	158	−1	0.226 668	5547	69	+4
30	0.803 198	10515	241	−2	0.535 393	12629	162	+2	0.232 215	5477	70	+3
31	0.792 683	10754	239	+2	0.548 022	12463	166	+5	0.237 692	5405	72	+4
Nov. 1	−0.781 929	+10989	+235	−3	−0.560 485	−12294	+169	+4	−0.243 097	−5332	+ 73	+3
2	0.770 940	11221	232	−4	0.572 779	12121	173	+5	0.248 429	5257	75	+3
3	0.759 719	11451	230	−1	0.584 900	11944	177	+5	0.253 686	5181	76	+1
4	0.748 268	11677	226	−3	0.596 844	11765	179	0	0.258 867	5102	79	+3
5	0.736 591	11900	223	−1	0.608 609	11581	184	+4	0.263 969	5024	78	−4
6	0.724 691	12121	221	+3	0.620 190	11393	188	+4	0.268 993	4942	82	+2
7	−0.712 570	+12337	+216	−2	−0.631 583	−11203	+190	−3	−0.273 935	−4859	+ 83	+1
8	0.700 233	12551	214	+3	0.642 786	11008	195	−2	0.278 794	4776	83	−4
9	0.687 682	12762	211	+5	0.653 794	10811	197	−5	0.283 570	4689	87	+4
10	0.674 920	12968	206	−2	0.664 605	10609	202	0	0.288 259	4602	87	−1
11	0.661 952	13171	203	−1	0.675 214	10404	205	+2	0.292 861	4513	89	−3
12	0.648 781	13371	200	+2	0.685 618	10195	209	+5	0.297 374	4423	90	−4
13	−0.635 410	+13567	+196	0	−0.695 813	− 9982	+213	+5	−0.301 797	−4330	+ 93	+1
14	0.621 843	13758	191	−5	0.705 795	9767	215	−3	0.306 127	4237	93	−4
15	0.608 085	13946	188	−2	0.715 562	9548	219	−2	0.310 364	4142	95	−1
16	0.594 139	14129	183	−3	0.725 110	9325	223	+1	0.314 506	4044	98	+4
17	0.580 010	14308	179	+1	0.734 435	9099	226	0	0.318 550	3947	97	−4
18	0.565 702	14483	175	+4	0.743 534	8869	230	+1	0.322 497	3847	100	0
19	−0.551 219	+14652	+169	0	−0.752 403	− 8638	+231	−4	−0.326 344	−3746	+101	+1
20	0.536 567	14817	165	+2	0.761 041	8402	236	+3	0.330 090	3644	102	+1
21	0.521 750	14977	160	+1	0.769 443	8164	238	+2	0.333 734	3540	104	+2
22	0.506 773	15131	154	−3	0.777 607	7924	240	0	0.337 274	3437	103	−3
23	0.491 642	+15282	151	+1	0.785 531	− 7681	243	0	0.340 711	−3331	106	+4
24	−0.476 360		+144	−5	−0.793 212		+244	−3	−0.344 042		+107	+5

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

0^h Welt-Zeit	Mittleres Äquinoktium 1925.0											
	X			ΔX*)	Y			ΔY*)	Z			ΔZ*)
1933												
Nov. 24	−0.476 360	+15 426	+144	−5	−0.793 212	−7 437	+244	−3	−0.344 042	−3 224	+107	+5
25	0.460 934	15 567	141	0	0.800 649	7 189	248	+3	0.347 266	3 118	106	−2
26	0.445 367	15 702	135	−2	0.807 838	6 941	248	−2	0.350 384	3 010	108	+1
27	0.429 665	15 833	131	+2	0.814 779	6 689	252	+4	0.353 394	2 901	109	+4
28	0.413 832	15 959	126	+3	0.821 468	6 437	252	0	0.356 295	2 791	110	+4
29	0.397 873	16 081	122	+4	0.827 905	6 182	255	+4	0.359 086	2 681	110	−2
30	−0.381 792	+16 197	+116	0	−0.834 087	−5 925	+257	+4	−0.361 767	−2 570	+111	−4
Dez. 1	0.365 595	16 310	113	+2	0.840 012	5 667	258	−1	0.364 337	2 458	112	−4
2	0.349 285	16 416	106	−4	0.845 679	5 408	259	−4	0.366 795	2 346	112	−5
3	0.332 869	16 520	104	+4	0.851 087	5 145	263	+3	0.369 141	2 232	114	0
4	0.316 349	16 617	97	−2	0.856 232	4 882	263	−2	0.371 373	2 118	114	−2
5	0.299 732	16 710	93	+1	0.861 114	4 617	265	0	0.373 491	2 003	115	−2
6	−0.283 022	+16 799	+ 89	+4	−0.865 731	−4 350	+267	+1	−0.375 494	−1 888	+115	−3
7	0.266 223	16 882	83	0	0.870 081	4 082	268	−1	0.377 382	1 771	117	+2
8	0.249 341	16 960	78	−2	0.874 163	3 812	270	+1	0.379 153	1 654	117	+1
9	0.232 381	17 033	73	−1	0.877 975	3 541	271	0	0.380 807	1 536	118	0
10	0.215 348	17 102	69	+5	0.881 516	3 268	273	+3	0.382 343	1 418	118	−4
11	0.198 246	17 165	63	+3	0.884 784	2 993	275	+3	0.383 761	1 299	119	−4
12	−0.181 081	+17 223	+ 58	+2	−0.887 777	−2 718	+275	−4	−0.385 060	−1 180	+119	−3
13	0.163 858	17 275	52	0	0.890 495	2 442	276	−5	0.386 240	1 059	121	+3
14	0.146 583	17 322	47	+2	0.892 937	2 163	279	+1	0.387 299	938	121	+1
15	0.129 261	17 363	41	+2	0.895 100	1 884	279	−3	0.388 237	817	121	−3
16	0.111 898	17 399	36	+4	0.896 984	1 604	280	−4	0.389 054	696	121	−4
17	0.094 499	17 428	29	+2	0.898 588	1 324	280	−5	0.389 750	573	123	+2
18	−0.077 071	+17 452	+ 24	+5	−0.899 912	−1 042	+282	+1	−0.390 323	− 452	+121	−4
19	0.059 619	17 470	18	+4	0.900 954	761	281	−2	0.390 775	329	123	0
20	0.042 149	17 482	12	+1	0.901 715	479	282	+1	0.391 104	207	122	−3
21	0.024 667	17 488	6	−1	0.902 194	− 198	281	−2	0.391 311	− 85	122	−4
22	−0.007 179	17 489	+ 1	0	0.902 392	+ 83	281	+1	0.391 396	+ 36	121	−5
23	+0.010 310	17 483	− 6	−4	0.902 309	365	282	+5	0.391 360	159	123	+4
24	+0.027 793	+17 474	− 9	+3	−0.901 944	+ 645	+280	0	−0.391 201	+ 280	+121	0
25	0.045 267	17 458	16	−2	0.901 299	925	280	−1	0.390 921	402	122	+2
26	0.062 725	17 437	21	−3	0.900 374	1 204	279	−2	0.390 519	522	120	−4
27	0.080 162	17 411	26	−4	0.899 170	1 483	279	+1	0.389 997	643	121	0
28	0.097 573	17 379	32	−5	0.897 687	1 762	279	+4	0.389 354	764	121	+4
29	0.114 952	17 343	36	0	0.895 925	2 039	277	+1	0.388 590	885	121	+3
30	+0.132 295	+17 302	− 41	+3	−0.893 886	+2 316	+277	+3	−0.387 705	+1 004	+119	−4
31	0.149 597	+17 255	47	+1	0.891 570	+2 593	277	+5	0.386 701	+1 124	120	−1
32	+0.166 852		− 51	+1	−0.888 977		+275	−1	−0.385 577		+119	−2

*) ΔX, ΔY, ΔZ sind in Einheiten der 7. Dezimale gegeben.

Mittleres Äquinoktium 1925.0

MERKUR 1933

0ʰ Welt-Zeit	log r	Helioz. Länge	Red. a. d. Bahn	Helioz. Breite	0ʰ Welt-Zeit	log r	Helioz. Länge	Red. a. d. Bahn	Helioz. Breite
1933		°	°	°	1933		°	°	°
Jan. 1	9.6297	205.77	−0.15	+2.60	Juli 5	9.6602	233.27	+0.04	−0.71
6	9.6492	221.42	−0.04	+0.74	10	9.6677	247.24	+0.14	−2.38
11	9.6621	235.93	+0.06	−1.04	15	9.6686	260.98	+0.20	−3.88
16	9.6683	249.83	+0.15	−2.68	20	9.6631	274.91	+0.21	−5.17
21	9.6681	263.57	+0.20	−4.14	25	9.6509	289.47	+0.18	−6.19
26	9.6613	277.58	+0.21	−5.39	30	9.6321	305.17	+0.09	−6.83
31	9.6479	292.32	+0.16	−6.35	Aug. 4	9.6066	322.58	−0.04	−6.97
Feb. 5	9.6278	308.28	+0.07	−6.91	9	9.5754	342.42	−0.16	−6.35
10	9.6012	326.09	−0.06	−6.92	14	9.5410	5.43	−0.21	−4.70
15	9.5691	346.47	−0.18	−6.13	19	9.5094	32.14	−0.11	−1.86
20	9.5346	10.16	−0.21	−4.25	24	9.4901	62.18	+0.11	+1.79
25	9.5045	37.56	−0.07	−1.21	29	9.4913	93.66	+0.21	+5.07
März 2	9.4886	68.06	+0.14	+2.48	Sept. 3	9.5126	123.71	+0.10	+6.80
7	9.4940	99.49	+0.21	+5.53	8	9.5449	150.27	−0.09	+6.83
12	9.5181	129.00	+0.06	+6.93	13	9.5792	172.94	−0.20	+5.71
17	9.5514	154.81	−0.12	+6.69	18	9.6098	192.33	−0.20	+4.04
22	9.5853	176.80	−0.21	+5.42	23	9.6345	209.32	−0.13	+2.19
27	9.6149	195.68	−0.19	+3.70	28	9.6526	224.67	−0.02	+0.34
April 1	9.6384	212.30	−0.11	+1.84	Okt. 3	9.6640	239.00	+0.08	−1.41
6	9.6553	227.42	0.00	0.00	8	9.6688	252.83	+0.17	−3.02
11	9.6654	241.62	+0.10	−1.72	13	9.6672	266.59	+0.21	−4.44
16	9.6690	255.40	+0.18	−3.30	18	9.6589	280.72	+0.21	−5.62
21	9.6661	269.20	+0.21	−4.68	23	9.6441	295.68	+0.15	−6.51
26	9.6566	283.45	+0.20	−5.82	28	9.6225	311.99	+0.04	−6.97
Mai 1	9.6405	298.62	+0.13	−6.63	Nov. 2	9.5945	330.30	−0.09	−6.83
6	9.6177	315.26	+0.02	−7.00	7	9.5616	351.34	−0.20	−5.82
11	9.5887	334.02	−0.12	−6.71	12	9.5274	15.83	−0.19	−3.68
16	9.5551	355.66	−0.21	−5.51	17	9.4995	44.01	−0.03	−0.42
21	9.5214	20.84	−0.17	−3.15	22	9.4879	74.95	+0.18	+3.25
26	9.4958	49.66	+0.02	+0.27	27	9.4979	106.19	+0.19	+6.00
31	9.4881	80.88	+0.20	+3.87	Dez. 2	9.5250	134.98	+0.02	+7.00
Juni 5	9.5020	111.85	+0.17	+6.32	7	9.5590	159.92	−0.15	+6.47
10	9.5311	139.96	−0.02	+7.00	12	9.5922	181.16	−0.21	+5.07
15	9.5655	164.17	−0.17	+6.26	17	9.6206	199.47	−0.18	+3.29
20	9.5980	184.79	−0.21	+4.76	22	9.6427	215.71	−0.09	+1.43
25	9.6253	202.66	−0.16	+2.95	27	9.6581	230.58	+0.02	−0.39
30	9.6461	218.59	−0.07	+1.08	32	9.6668	244.65	+0.12	−2.08
Juli 5	9.6602	233.27	+0.04	−0.71					

$\Omega = 47.442^\circ$ $i = 7.003^\circ$ $m = \frac{1}{6\,000\,000}$

Mittleres Äquinoktium 1925.0

0h Welt-Zeit		log r	Helioz. Länge	Red. a. d. Bahn	Helioz. Breite	log r	Helioz. Länge	Red. a. d. Bahn	Helioz. Breite
		VENUS 1933				MARS 1933			
1933			°	in 0.001	°		°	in 0.001	°
Jan.	1	9.85903	215.221	−50	+2.217	0.21892	134.487	+ 2	+1.844
	11	9.85985	231.223	−38	+1.423	0.21998	138.898	0	1.849
	21	9.86063	247.154	−15	+0.521	0.22079	143.290	− 2	1.844
	31	9.86131	263.026	+12	−0.417	0.22133	147.668	4	1.828
Febr.	10	9.86184	278.858	+36	−1.321	0.22162	152.038	7	1.801
	20	9.86217	294.670	+49	−2.123	0.22165	156.405	− 9	+1.764
März	2	9.86228	310.479	+48	−2.764	0.22142	160.774	10	1.717
	12	9.86217	326.302	+32	−3.196	0.22093	165.149	12	1.660
	22	9.86185	342.152	+ 7	−3.386	0.22019	169.537	13	1.592
April	1	9.86133	358.034	−21	−3.319	0.21919	173.942	14	1.515
	11	9.86065	13.953	−42	−2.998	0.21794	178.369	−15	+1.429
	21	9.85988	29.914	−50	−2.446	0.21644	182.825	15	1.333
Mai	1	9.85905	45.919	−44	−1.702	0.21469	187.313	15	1.229
	11	9.85825	61.971	−24	−0.823	0.21271	191.840	14	1.116
	21	9.85753	78.072	+ 4	+0.124	0.21050	196.410	14	0.995
	31	9.85695	94.223	+30	+1.063	0.20807	201.029	−12	+0.866
Juni	10	9.85655	110.421	+47	+1.921	0.20543	205.702	11	0.730
	20	9.85638	126.654	+49	+2.626	0.20259	210.434	9	0.588
	30	9.85644	142.907	+36	+3.123	0.19956	215.230	7	0.439
Juli	10	9.85672	159.158	+12	+3.370	0.19636	220.095	5	0.285
	20	9.85722	175.384	−16	+3.348	0.19300	225.034	− 2	+0.126
	30	9.85787	191.561	−39	+3.062	0.18952	230.052	+ 1	−0.036
Aug.	9	9.85864	207.673	−50	+2.536	0.18592	235.152	3	0.200
	19	9.85947	223.711	−45	+1.814	0.18223	240.338	6	0.365
	29	9.86027	239.674	−27	+0.954	0.17849	245.614	8	0.530
Sept.	8	9.86101	255.572	− 1	+0.024	0.17472	250.983	+10	−0.694
	18	9.86161	271.421	+26	−0.904	0.17096	256.446	12	0.854
	28	9.86203	287.239	+45	−1.762	0.16723	262.005	14	1.009
Okt.	8	9.86225	303.048	+50	−2.486	0.16359	267.659	15	1.157
	18	9.86225	318.863	+41	−3.021	0.16007	273.408	15	1.296
	28	9.86202	334.699	+19	−3.328	0.15671	279.249	+15	−1.423
Nov.	7	9.86159	350.565	− 8	−3.383	0.15356	285.179	14	1.538
	17	9.86098	6.467	−33	−3.180	0.15066	291.193	12	1.637
	27	9.86024	22.408	−48	−2.732	0.14804	297.285	10	1.719
Dez.	7	9.85944	38.393	−49	−2.072	0.14576	303.446	8	1.782
	17	9.85862	54.422	−34	−1.248	0.14383	309.668	+ 5	−1.825
	27	9.85785	70.501	−10	−0.324	0.14231	315.940	+ 2	1.847
	37	9.85720	86.629	+17	+0.628	0.14120	322.250	− 1	−1.846

Venus: $\Omega = 76.005^\circ$ $i = 3.394^\circ$ $m = \frac{1}{408\,000}$

Mars: $\Omega = 48.979^\circ$ $i = 1.850^\circ$ $m = \frac{1}{3\,093\,500}$

Mittleres Äquinoktium 1925.0

0ʰ Welt-Zeit		log R	Länge	log r	Heliozentr. Länge	Red. auf d. Bahn	Heliozentr. Breite
		ERDE 1933		JUPITER 1933			
1933			°		°	in 0.0001	°
Jan.	1	9.99267	100.032	0.733579	163.0691	+60	+1.1697
	11	9.99275	110.224	0.733730	163.8352	58	1.1774
	21	9.99305	120.407	0.733878	164.6008	57	1.1849
	31	9.99357	130.571	0.734023	165.3658	56	1.1922
Febr.	10	9.99427	140.706	0.734164	166.1304	54	1.1993
	20	9.99515	150.804	0.734301	166.8945	+53	+1.2062
März	2	9.99618	160.858	0.734436	167.6581	52	1.2128
	12	9.99731	170.862	0.734566	168.4212	50	1.2193
	22	9.99852	180.812	0.734693	169.1839	49	1.2255
April	1	9.99977	190.706	0.734816	169.9462	47	1.2314
	11	0.00101	200.543	0.734936	170.7080	+46	+1.2372
	21	0.00222	210.324	0.735053	171.4694	44	1.2428
Mai	1	0.00336	220.052	0.735165	172.2304	43	1.2481
	11	0.00439	229.732	0.735274	172.9911	41	1.2532
	21	0.00530	239.369	0.735380	173.7513	39	1.2581
	31	0.00605	248.969	0.735482	174.5112	+38	+1.2627
Juni	10	0.00662	258.539	0.735580	175.2708	36	1.2672
	20	0.00701	268.089	0.735674	176.0300	34	1.2714
	30	0.00720	277.626	0.735765	176.7889	32	1.2754
Juli	10	0.00718	287.159	0.735851	177.5475	31	1.2791
	20	0.00695	296.697	0.735935	178.3058	+29	+1.2827
	30	0.00653	306.250	0.736015	179.0638	27	1.2860
Aug.	9	0.00593	315.825	0.736091	179.8216	25	1.2891
	19	0.00515	325.431	0.736163	180.5791	23	1.2919
	29	0.00422	335.075	0.736231	181.3363	21	1.2945
Sept.	8	0.00317	344.763	0.736295	182.0933	+19	+1.2970
	18	0.00201	354.501	0.736356	182.8501	18	1.2991
	28	0.00080	4.292	0.736413	183.6067	16	1.3011
Okt.	8	9.99955	14.138	0.736467	184.3631	14	1.3028
	18	9.99831	24.042	0.736516	185.1193	12	1.3043
	28	9.99711	34.002	0.736562	185.8753	+10	+1.3056
Nov.	7	9.99600	44.014	0.736603	186.6312	8	1.3066
	17	9.99500	54.076	0.736641	187.3870	6	1.3074
	27	9.99414	64.181	0.736676	188.1426	4	1.3080
Dez.	7	9.99347	74.322	0.736706	188.8981	+ 2	1.3084
	17	9.99299	84.489	0.736733	189.6536	0	+1.3085
	27	9.99273	94.674	0.736756	190.4089	— 2	1.3084
	37	9.99269	104.866	0.736775	191.1641	— 4	+1.3081

Erde: $m = \frac{1}{329\,390}$ Jupiter: $\Omega = 99°.6906$ $i = 1°.3073$ $m = \frac{1}{1\,047.35}$

Mittleres Äquinoktium 1925.0

0^h Welt-Zeit	log r	Heliozentrische Länge	Red. auf die Bahn	Heliozentrische Breite
SATURN 1933				
		°	in 0.0001 °	°
1932 Dez. 22	0.997819	305.9182	+118	−0.5570
1933 Jan. 31	0.997524	307.1452	128	0.6089
März 12	0.997221	308.3741	139	0.6606
April 21	0.996908	309.6048	149	0.7120
Mai 31	0.996586	310.8373	159	0.7632
Juli 10	0.996255	312.0718	168	0.8141
Aug. 19	0.995916	313.3083	177	0.8647
Sept. 28	0.995568	314.5469	186	0.9150
Nov. 7	0.995212	315.7875	194	0.9650
1933 Dez. 17	0.994847	317.0304	202	1.0146
1934 Jan. 26	0.994474	318.2754	+210	−1.0638

$\Omega = 113.0016°$ $i = 2.4913°$ $m = \frac{1}{3501.6}$

0^h Welt-Zeit	log r	Heliozentrische Länge	Red. auf die Bahn	Heliozentrische Breite
URANUS 1933				
		°	in 0.001 °	°
1932 Dez. 22	1.29977	22.017	− 3	−0.606
1933 Jan. 31	1.29968	22.450	3	0.602
März 12	1.29959	22.884	3	0.599
April 21	1.29950	23.318	3	0.595
Mai 31	1.29941	23.752	3	0.591
Juli 10	1.29932	24.186	3	0.587
Aug. 19	1.29922	24.621	3	0.584
Sept. 28	1.29913	25.055	3	0.580
Nov. 7	1.29903	25.490	3	0.576
1933 Dez. 17	1.29894	25.925	3	0.572
1934 Jan. 26	1.29884	26.360	− 3	−0.568

$\Omega = 73.616°$ $i = 0.773°$ $m = \frac{1}{22869}$

0^h Welt-Zeit	log r	Heliozentrische Länge	Red. auf die Bahn	Heliozentrische Breite
NEPTUN 1933				
		°	in 0.001 °	°
1932 Dez. 22	1.47966	158.293	+11	+0.816
1933 Jan. 31	1.47967	158.531	11	0.823
März 12	1.47969	158.769	11	0.829
April 21	1.47970	159.007	11	0.836
Mai 31	1.47971	159.245	12	0.842
Juli 10	1.47973	159.483	12	0.849
Aug. 19	1.47974	159.720	12	0.855
Sept. 28	1.47975	159.958	12	0.862
Nov. 7	1.47976	160.196	12	0.868
1933 Dez. 17	1.47978	160.434	12	0.875
1934 Jan. 26	1.47979	160.672	+12	+0.881

$\Omega = 130.954°$ $i = 1.777°$ $m = \frac{1}{19314}$

Mittlere und Scheinbare Sternörter 1933

Reduktionsgrößen

Mittlere Sternörter 1933.0

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
905	[2 Ceti]	4.62	A 0	0 0 18.516	+3.0735	+ 12	−17 42 32.23	+20.040	− 4
1	α Androm.	2.15	A 0p	0 4 55.194	+3.0993	+ 107	+28 43 14.04	+19.879	− 161
2	β Cassiopeiae	2.42	F 5	0 5 35.410	+3.1944	+ 677	+58 46 48.87	+19.858	− 180
3	ε Phoenicis	3.94	K 0	0 6 0.856	+3.0464	+ 99	−46 7 2.26	+19.845	− 192
4	[22 Androm.]	5.08	F 0	0 6 49.828	+3.1146	+ 8	+45 41 57.81	+20.032	− 3
5	[κ² Sculptoris]	5.56	K 0	0 8 10.443	+3.0478	+ 4	−28 10 23.32	+20.037	+ 6
6	[ϑ Sculptoris]	5.19	F 5	0 8 19.701	+3.0487	+ 104	−35 30 29.52	+20.155	+ 124
7	γ Pegasi	2.87	B 2	0 9 46.971	+3.0881	+ 1	+14 48 39.78	+20.012	− 14
8	[Br 6]	6.23	B 9	0 12 24.011	+3.3826	+ 68	+76 34 42.90	+20.016	+ 1
9	ι Ceti	3.75	K 0	0 16 0.850	+3.0564	− 15	− 9 11 43.03	+19.963	− 32
10	ζ Tucanae	4.34	F 8	0 16 35.438	+3.1325	+2694	−65 16 7.14	+21.146	+1154
11	β Hydri	2.90	G 0	0 22 15.626	+3.1752	+6932	−77 37 53.63	+20.268	+ 318
12	α Phoenicis	2.44	K 0	0 22 58.501	+2.9664	+ 168	−42 40 11.98	+19.535	− 409
13	12 Ceti	6.04	K 5	0 26 37.171	+3.0620	+ 8	− 4 19 38.56	+19.901	− 8
14	[Ceti 49 G.]	5.23	A 3	0 27 1.753	+2.9999	− 25	−24 9 29.93	+19.914	+ 9
15	[λ¹ Phoenicis]	4.88	A 2	0 28 11.252	+2.8954	+ 122	−49 10 26.63	+19.905	+ 12
16	[κ Cassiop.]	4.24	B 0	0 29 10.553	+3.4008	+ 11	+62 33 44.16	+19.885	+ 3
17	ζ Cassiopeiae	3.72	B 3	0 33 13.624	+3.3364	+ 23	+53 31 42.28	+19.827	− 7
18	π Androm.	4.44	B 3	0 33 17.804	+3.2019	+ 17	+33 21 2.73	+19.833	0
19	[ε Androm.]	4.52	G 5	0 35 0.597	+3.1681	− 173	+28 56 53.52	+19.560	− 251
20	δ Androm.	3.49	K 2	0 35 44.380	+3.2057	+ 106	+30 29 40.79	+19.717	− 84
21	α Cassiopeiae	2.47	K 0	0 36 41.514	+3.3968	+ 60	+56 10 12.61	+19.758	− 29
22	β Ceti	2.24	K 0	0 40 13.622	+3.0116	+ 160	−18 21 14.83	+19.775	+ 39
23	[η Phoenicis]	4.53	A 0	0 40 21.016	+2.7013	+ 5	−57 49 50.30	+19.726	− 8
26	[λ² Sculptoris]	5.97	K 0	0 40 57.772	+2.8998	+ 178	−38 47 26.61	+19.839	+ 114
25	ο Cassiopeiae	4.70	B 2	0 40 58.924	+3.3383	+ 22	+47 55 4.54	+19.716	− 8
24	21 Cassiopeiae	5.59	A 2	0 41 11.221	+3.9357	− 57	+74 37 19.72	+19.698	− 23
27	ζ Androm.	4.30	K 0	0 43 46.953	+3.1779	− 75	+23 54 10.73	+19.601	− 79
28	[δ Piscium]	4.55	K 5	0 45 12.226	+3.1113	+ 52	+ 7 13 14.61	+19.610	− 46
31	[λ Hydri]	4.96	K 5	0 46 16.600	+2.0920	+ 397	−75 17 16.71	+19.610	− 27
29	[Br 82]	5.45	F 2 + A 2	0 46 38.616	+3.6298	+ 59	+63 52 59.46	+19.626	− 5
30	[19 Ceti]	5.24	F 5	0 46 46.235	+3.0044	− 159	−11 0 17.48	+19.406	− 223
34	[λ² Tucanae]	5.34	K 0	0 52 30.224	+2.2409	− 33	−69 53 21.25	+19.475	− 45
32	γ Cassiopeiae	2.25	B 0 p	0 52 38.902	+3.6113	+ 37	+60 21 15.50	+19.513	− 4
33	μ Androm.	3.94	A 2	0 53 1.621	+3.3264	+ 129	+38 8 10.79	+19.546	+ 36
35	α Sculptoris	4.39	B 5	0 55 22.667	+2.8900	− 5	−29 43 9.94	+19.457	− 5
36	ε Piscium	4.45	K 0	0 59 27.810	+3.1127	− 55	+ 7 31 47.45	+19.404	+ 30
37	[26 Ceti]	6.07	F 0	1 0 22.050	+3.0871	+ 81	+ 1 0 28.95	+19.314	− 39
38	β Phoenicis	3.35	K 0	1 3 5.689	+2.6767	− 56	−47 4 38.85	+19.274	− 15
39	[ι Tucanae]	5.32	K 0	1 4 39.684	+2.3793	+ 100	−62 7 58.10	+19.248	− 4

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
40	[η Ceti]	3.60	K 0	1 5 13.095	+3.0169	+ 137	−10 32 13.28	+19.106	−132
42	β Androm.	2.37	M a	1 5 58.436	+3.3563	+ 151	+35 15 56.93	+19.107	−113
41	[44 H. Cephei]	5.68	A 0	1 6 24.636	+5.1307	+ 335	+79 19 5.29	+19.217	+ 9
43	[τ Piscium]	4.70	K 0	1 7 57.872	+3.3015	+ 56	+29 44 3.37	+19.128	− 41
44	[Sculpt. 102 G.]	5.91	A 5	1 9 40.174	+2.7619	+ 39	−38 12 40.28	+19.098	− 27
45	υ Piscium	4.67	A 2	1 15 46.687	+3.2946	+ 15	+26 54 44.59	+18.948	− 11
47	ϑ Ceti	3.83	K 0	1 20 40.422	+2.9983	− 55	− 8 31 42.97	+18.601	−214
46	[ψ Cassiop.]	4.96	K 0	1 21 10.365	+4.2210	+ 135	+67 46 51.87	+18.832	+ 32
48	δ Cassiopeiae	2.80	A 5	1 21 24.912	+3.9142	+ 399	+59 53 15.96	+18.749	− 43
49	[γ Phoenicis]	3.40	K 5	1 25 27.361	+2.6046	− 38	−43 39 40.39	+18.449	−218
50	η Piscium	3.72	G 5	1 27 53.651	+3.2085	+ 15	+15 0 3.28	+18.581	− 7
51	40 Cassiopeiae	5.50	K 0	1 33 7.248	+4.7665	− 20	+72 41 58.24	+18.406	− 6
53	[Hydri 14 G.]	6.06	G 5	1 33 11.277	+0.3859	− 70	−78 50 41.39	+18.282	−128
52	υ Persei	3.77	K 0	1 33 52.100	+3.6763	+ 64	+48 17 21.94	+18.273	−113
54	α Eridani	0.60	B 5	1 35 13.316	+2.2360	+ 122	−57 34 36.44	+18.301	− 38
55	43 Cassiopeiae	5.54	A 0 p	1 37 20.997	+4.4248	+ 88	+67 42 18.31	+18.261	− 2
56	[ν Piscium]	4.68	K 0	1 37 56.532	+3.1212	− 16	+ 5 8 56.79	+18.243	+ 2
58	[Sculpt. 129 G.]	5.64	A 0	1 39 5.719	+2.6426	− 57	−37 10 11.53	+18.176	− 23
57	φ Persei	4.19	B 0 p	1 39 26.920	+3.7535	+ 26	+50 21 6.98	+18.172	− 15
59	τ Ceti	3.65	K 0	1 40 57.313	+2.7870	−1194	−16 17 23.46	+18.983	+853
60	ο Piscium	4.50	K 0	1 41 51.155	+3.1668	+ 47	+ 8 49 16.15	+18.147	+ 50
61	Lac. ε Sculpt.	5.39	F 0	1 42 30.420	+2.8086	+ 99	−25 23 14.06	+17.997	− 75
62	ζ Ceti	3.92	K 0	1 48 9.133	+2.9608	+ 22	−10 39 55.55	+17.819	− 34
64	α Trianguli	3.58	F 5	1 49 15.373	+3.4175	+ 11	+29 15 11.43	+17.576	−233
63	ε Cassiopeiae	3.44	B 3	1 49 33.157	+4.3023	+ 50	+63 20 27.98	+17.782	− 15
65	ξ Piscium	4.84	K 0	1 50 5.082	+3.1051	+ 13	+ 2 51 26.43	+17.795	+ 19
66	β Arietis	2.72	A 5	1 50 56.026	+3.3118	+ 65	+20 28 52.49	+17.633	−109
67	ψ Phoenicis	4.41	M b	1 50 57.647	+2.4051	− 94	−46 37 49.95	+17.639	−101
69	[η^2 Hydri]	4.72	K 0	1 53 14.054	+1.5183	+ 119	−67 58 35.47	+17.726	+ 79
68	χ Eridani	3.73	G 5	1 53 21.011	+2.3339	+ 712	−51 56 32.11	+17.912	+270
72	α Hydri	3.02	F 0	1 56 39.477	+1.3896	+ 361	−61 53 44.00	+17.524	+ 21
71	υ Ceti	4.18	M a	1 56 50.878	+2.8264	+ 91	−21 24 6.43	+17.481	− 14
70	50 Cassiopeiae	4.06	A 2	1 57 40.307	+5.0957	− 91	+72 5 53.80	+17.484	+ 25
73	γ Androm.	2.28 5.08	K 0 A 0	1 59 46.641	+3.6780	+ 43	+42 0 32.48	+17.315	− 54
74	α Arietis	2.23	K 2	2 3 23.460	+3.3796	+ 137	+23 8 47.37	+17.065	−143
75	β Trianguli	3.08	A 5	2 5 32.961	+3.5666	+ 122	+34 40 16.51	+17.071	− 40
77	[6 Persei]	5.40	K 0	2 9 8.200	+3.9834	+ 368	+50 45 19.97	+16.776	−169
76	55 Cassiopeiae	6.15	F 5 + A 2	2 9 11.872	+4.6917	− 10	+66 12 41.92	+16.945	+ 3
78	Lac. μ Forn.	5.24	A 0	2 9 57.487	+2.6423	+ 13	−31 2 15.21	+16.909	+ 2
79	[γ Trianguli]	4.07	A 0	2 13 19.443	+3.5634	+ 37	+33 32 18.03	+16.703	− 44

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0″.001
		M		h m s	s		° ′ ″	″	
80	67 Ceti	5.70	G 5	2 13 38.396	+2.9916	+ 55	− 6 43 48.66	+16.622	−110
82	[φ Eridani]	3.78	B 8	2 14 6.897	+2.1424	+ 81	−51 49 19.01	+16.673	− 36
81	[ϑ Arietis]	5.69	A 0	2 14 23.651	+3.3352	− 10	+19 35 31.39	+16.694	− 2
83	[ϰ Fornacis]	5.37	F 5	2 19 28.598	+2.7451	+ 142	−24 7 12.53	+16.382	− 63
84	[λ Horologii]	5.47	F 2	2 23 1.450	+1.6771	− 95	−60 36 41.30	+16.129	−137
86	[ϰ Eridani]	4.44	B 5	2 24 31.666	+2.1975	− 2	−48 0 15.07	+16.166	− 23
85	ξ² Ceti	4.34	A 0	2 24 35.622	+3.1886	+ 26	+ 8 9 38.32	+16.181	− 4
88	[λ¹ Fornacis]	5.88	K 0	2 30 19.275	+2.4992	− 43	−34 56 39.06	+15.853	− 32
87	36 H. Cassiop.	5.34	K 0	2 31 37.111	+5.6749	− 60	+72 31 36.88	+15.837	+ 21
90	μ Hydri	5.29	K 0	2 33 2.776	−1.3024	+ 469	−79 24 6.75	+15.705	− 33
89	ν Arietis	5.36	A 2	2 35 0.408	+3.4045	− 9	+21 40 21.68	+15.616	− 16
91	δ Ceti	4.04	B 2	2 36 2.760	+3.0742	+ 7	+ 0 2 25.34	+15.573	− 2
95	[ε Hydri]	4.26	B 9	2 38 33.135	+0.9197	+ 168	−68 33 13.58	+15.440	+ 5
92	[Br 366]	5.84	A 2	2 39 1.922	+5.1429	+ 25	+67 32 29.52	+15.380	− 29
94	[35 Arietis]	4.58	B 3	2 39 30.850	+3.5179	+ 4	+27 25 23.33	+15.375	− 7
93	ϑ Persei	4.22	F 8	2 39 36.722	+4.0918	+ 346	+48 56 46.58	+15.288	− 89
96	[γ Ceti]	3.58	A 2	2 39 49.576	+3.1074	− 98	+ 2 57 15.72	+15.216	−148
97	π Ceti	4.39	B 5	2 40 55.970	+2.8547	− 8	−14 8 29.58	+15.293	− 9
98	μ Ceti	4.36	F 0	2 41 19.008	+3.2417	+ 189	+ 9 49 56.04	+15.249	− 31
99	[η Persei]	3.93	K 0	2 45 47.669	+4.3685	+ 28	+55 37 7.70	+15.013	− 11
100	41 Arietis	3.68	B 8	2 46 2.065	+3.5290	+ 51	+26 59 7.71	+14.897	−113
101	β Fornacis	4.50	K 0	2 46 17.147	+2.5103	+ 63	−32 41 11.53	+15.154	+159
102	τ² Eridani	4.81	K 0	2 47 59.928	+2.7208	− 39	−21 16 46.35	+14.866	− 29
103	τ Persei	4.06	G 0 + A 5	2 49 29.648	+4.2465	+ 3	+52 29 22.73	+14.806	− 2
104	η Eridani	4.05	K 0	2 53 9.173	+2.9303	+ 52	− 9 9 50.04	+14.372	−218
106	ϑ Eridani	3.42 4.42	A 2	2 55 43.109	+2.2724	− 67	−40 34 20.39	+14.463	+ 28
105	47 H. Cephei	5.66	M a	2 57 5.838	+7.9318	− 113	+79 9 23.97	+14.374	+ 22
107	α Ceti	2.82	M a	2 58 46.457	+3.1349	− 9	+ 3 49 40.41	+14.172	− 76
108	γ Persei	3.08	F 5 + A 3	2 59 55.821	+4.3379	+ 2	+53 14 43.75	+14.174	− 4
109	*ρ Persei	var.	M b	3 0 52.517	+3.8411	+ 114	+38 34 55.07	+14.016	−103
110	μ Horologii	5.16	F 0	3 2 1.812	+1.4104	− 117	−59 59 50.03	+13.980	− 68
113	[ϑ Hydri]	5.52	B 8	3 2 6.164	+0.1146	+ 51	−72 9 50.39	+14.065	+ 22
111	*β Persei	var.	B 8	3 3 48.073	+3.8997	+ 7	+40 41 55.86	+13.935	− 1
112	[ι Persei]	4.17	G 0	3 4 13.206	+4.3235	+1297	+49 21 31.57	+13.826	− 84
114	δ Arietis	4.53	K 0	3 7 47.605	+3.4288	+ 106	+19 28 28.30	+13.679	− 4
117	12 Eridani	3.95	F 8	3 9 13.398	+2.5470	+ 241	−29 15 1.24	+14.235	+644
116	[94 Ceti]	5.14	F 8	3 9 21.198	+3.0618	+ 136	− 1 26 44.32	+13.522	− 62
118	[Horol. 38 G.]	5.72	N a	3 10 51.043	+1.5164	− 5	−57 34 19.70	+13.480	− 6
115	48 H. Cephei	5.50	F 0	3 11 44.758	+7.5629	+ 183	+77 29 29.09	+13.385	− 44
119	[e Eridani]	4.30	G 5	3 17 15.146	+2.3958	+2785	−43 19 31.51	+13.797	+730

Nr. 109. Größe: Max. 3.3, Min. 4.1 Nr. 111. Größe: Max. 2.3, Min. 3.5

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0^s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
120	α Persei	1.90	F 5	3 19 31.705	+4.2776	+ 29	+49 37 27.20	+12.890	— 26
121	ο Tauri	3.80	G 5	3 21 12.291	+3.2276	— 44	+ 8 47 39.17	+12.727	— 76
123	[ξ Tauri]	3.75	B 8	3 23 32.097	+3.2504	+ 39	+ 9 30 0.46	+12.601	— 45
122	2 H. Camelop.	4.42	B 9 p	3 23 37.589	+4.8483	— 1	+59 42 31.36	+12.646	+ 6
124	[σ Persei]	4.55	K 0	3 25 50.468	+4.2252	+ 9	+47 45 55.83	+12.512	+ 23
125	f Tauri	4.28	K 0	3 27 10.238	+3.3110	+ 13	+12 42 29.49	+12.392	— 5
126	[κ Reticuli]	4.80	F 5	3 28 11.946	+1.0408	+514	—63 10 24.57	+12.687	+361
127	ε Eridani	3.81	K 0	3 29 46.369	+2.8264	—658	— 9 41 2.80	+12.231	+ 13
128	[Horol. 45 G.]	5.60	K 0	3 30 34.578	+1.7844	+ 48	—50 36 19.20	+12.242	+ 80
130	[y Eridani]	4.58	K 0	3 34 41.345	+2.1520	— 16	—40 29 36.94	+11.850	— 24
129	[Grb 716]	5.32	M a	3 36 19.317	+5.1949	— 21	+63 0 5.66	+11.781	+ 22
131	δ Persei	3.10	B 5	3 38 8.716	+4.2671	+ 33	+47 34 29.71	+11.594	— 35
133	[δ Fornacis]	4.93	B 5	3 39 34.948	+2.3853	— 5	—32 9 5.86	+11.534	+ 7
135	[δ Eridani]	3.72	K 0	3 40 2.234	+2.8737	— 64	— 9 59 20.71	+12.241	+747
132	[ο Persei]	3.94	B 1	3 40 6.703	+3.7600	+ 8	+32 4 38.42	+11.472	— 17
134	ν Persei	3.93	F 5	3 40 38.080	+4.0727	— 6	+42 22 6.29	+11.446	— 5
136	[17 Tauri]	3.81	B 5 p	3 40 53.557	+3.5611	+ 17	+23 54 14.63	+11.389	— 44
137	[24 Eridani]	5.09	B 8	3 41 6.206	+3.0467	+ 1	— 1 22 24.02	+11.409	— 8
138	5 H. Camelop.	4.67	A 0	3 43 15.132	+6.3109	+ 42	+71 7 41.74	+11.223	— 40
141	β Reticuli	3.80	K 0	3 43 21.161	+0.7476	+477	—65 1 3.71	+11.316	+ 61
139	η Tauri	2.96	B 5 p	3 43 29.858	+3.5649	+ 17	+23 53 57.45	+11.197	— 48
140	τ^6 Eridani	4.33	F 8	3 43 57.842	+2.5802	—123	—23 26 47.54	+10.692	—519
142	[27 Tauri]	3.80	B 8	3 45 10.438	+3.5658	+ 14	+23 50 59.72	+11.078	— 45
143	g Eridani	4.24	K 0	3 46 56.791	+2.2452	— 40	—36 24 8.34	+10.942	— 52
146	γ Hydri	3.17	M a	3 48 15.363	—0.9436	+124	—74 26 41.40	+11.007	+109
144	ζ Persei	2.91	B 1	3 49 54.929	+3.7696	+ 11	+31 41 10.06	+10.765	— 11
145	*9 H. Camelop.	5.22	K 0 + A 0	3 51 24.498	+5.1066	— 3	+60 54 52.33	+10.649	— 16
147	ε Persei	2.96	B 1	3 53 21.078	+4.0234	+ 23	+39 49 4.53	+10.492	— 29
148	ξ Persei	4.05	Oe 5	3 54 36.743	+3.8910	+ 10	+35 35 59.34	+10.419	— 8
149	γ Eridani	3.19	K 5	3 54 54.135	+2.7988	+ 42	—13 41 53.06	+10.294	—112
150	*λ Tauri	var.	B 3	3 56 57.916	+3.3229	— 5	+12 18 8.35	+10.238	— 13
151	ν Tauri	3.94	A 0	3 59 35.401	+3.1909	+ 4	+ 5 48 16.48	+10.043	— 10
153	[Erid. 174 G.]	5.57	A 5	4 2 51.686	+2.4724	+148	—27 50 2.68	+ 9.912	+108
152	c Persei	4.03	B 3 p	4 3 47.394	+4.3526	+ 33	+47 32 7.24	+ 9.701	— 32
154	o^1 Eridani	4.14	F 2	4 8 35.624	+2.9284	+ 8	— 7 0 40.05	+ 9.446	+ 82
155	α Horologii	3.83	K 0	4 11 46.736	+1.9860	+ 20	—42 27 32.12	+ 8.898	—219
156	α Reticuli	3.36	G 5	4 13 33.373	+0.7690	+ 50	—62 38 28.28	+ 9.025	+ 47
157	[γ Doradus]	4.36	F 5	4 14 16.047	+1.5691	+ 89	—51 39 18.55	+ 9.094	+172
160	υ^4 Eridani	3.59	B 9	4 15 21.413	+2.2688	+ 37	—33 57 39.91	+ 8.825	— 12
159	[γ Tauri]	3.86	K 0	4 15 58.662	+3.4134	+ 82	+15 28 1.80	+ 8.759	— 29

Nr. 145. Doppelstern, Größe der Komponenten: 5.0 und 8.2

Nr. 150. Größe: Max. 3.3, Min. 4.2

Mittlere Sternörter 1933.0

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0″.001
		M		h m s	s		° ′ ″	″	
158	[54 Persei]	5.10	G 5	4 16 3.307	+3.8937	— 20	+34 24 23.71	+8.776	— 6
161	[Erid. 212 G.]	5.31	A 0	4 17 43.686	+2.6187	+ 36	—20 47 53.07	+8.666	+ 15
162	δ Tauri	3.93	K 0	4 19 4.088	+3.4592	+ 78	+17 23 12.40	+8.514	— 31
163	[η Reticuli]	5.18	K 0	4 21 9.587	+0.6461	+127	—63 32 43.08	+8.539	+160
166	[δ Mensae]	5.62	K 0 p	4 22 27.394	—4.0918	+100	—80 22 20.88	+8.347	+ 71
164	ε Tauri	3.63	K 0	4 24 42.105	+3.5027	+ 80	+19 1 59.95	+8.061	— 35
165	*[1 Camel. seq.]	5.42	B 1	4 26 42.904	+4.7482	+ 7	+53 46 1.98	+7.935	0
167	[δ Caeli]	5.16	B 3	4 28 46.869	+1.8364	— 6	—45 5 49.08	+7.752	— 17
168	α Tauri	1.06	K 5	4 32 4.418	+3.4419	+ 48	+16 22 33.81	+7.314	—189
171	α Doradus	3.47	A 0 p	4 32 32.907	+1.2969	+ 71	—55 10 57.97	+7.467	+ 3
170	[υ² Eridani]	3.88	K 0	4 32 56.659	+2.3316	— 46	—30 41 54.29	+7.426	— 6
169	ν Eridani	4.12	B 2	4 32 58.199	+2.9975	+ 2	— 3 29 17.51	+7.426	— 4
172	53 Eridani	3.98	K 0	4 35 6.636	+2.7469	— 54	—14 26 2.12	+7.091	—164
174	τ Tauri	4.33	B 5	4 38 13.277	+3.6006	+ 5	+22 49 47.66	+6.982	— 19
173	Grb 848	6.04	F 0	4 39 46.973	+8.0524	+105	+75 49 21.78	+6.740	—134
176	[μ Eridani]	4.18	B 5	4 42 9.079	+3.0000	+ 13	— 3 22 34.25	+6.667	— 12
175	4 Camelop.	5.35	A 2	4 42 24.815	+4.9935	+ 60	+56 38 25.23	+6.510	—146
177	[μ Mensae]	5.69	B 9	4 43 43.515	—0.6045	+ 17	—71 3 14.96	+6.577	+ 28
178	9 Camelop.	4.38	B 0	4 47 22.511	+5.9566	+ 5	+66 13 53.51	+6.256	+ 10
179	[π⁴ Orionis]	3.78	B 3	4 47 38.160	+3.1950	0	+ 5 29 30.48	+6.217	— 7
180	π⁵ Orionis	3.87	B 3	4 50 45.589	+3.1248	— 2	+ 2 19 56.12	+5.961	— 3
181	ι Aurigae	2.90	K 2	4 52 37.651	+3.9065	+ 10	+33 3 42.16	+5.788	— 20
183	*ε Aurigae	var.	F 5 p	4 57 9.419	+4.3040	+ 6	+43 43 33.41	+5.414	— 14
182	10 Camelop.	4.22	G 0 p	4 57 26.983	+5.3332	— 1	+60 20 48.14	+5.391	— 12
184	ι Tauri	4.70	A 5	4 59 5.351	+3.5861	+ 53	+21 29 45.02	+5.222	— 43
185	η Aurigae	3.28	B 3	5 1 48.776	+4.2064	+ 33	+41 8 44.47	+4.963	— 71
186	ε Leporis	3.29	K 5	5 2 37.459	+2.5397	+ 20	—22 27 35.54	+4.898	— 68
187	[η² Pictoris]	4.92	K 5	5 3 13.618	+1.5507	+ 35	—49 40 3.84	+4.921	+ 6
189	[ζ Doradus]	4.76	F 8	5 4 21.454	+1.0249	— 70	—57 33 50.01	+4.922	+103
188	β Eridani	2.92	A 3	5 4 33.309	+2.9496	— 59	— 5 10 18.29	+4.723	— 79
190	[λ Eridani]	4.34	B 2	5 5 56.360	+2.8712	+ 3	— 8 50 19.47	+4.680	— 4
192	μ Aurigae	4.78	A 3	5 8 50.434	+4.1047	— 13	+38 24 24.90	+4.359	— 79
194	β Orionis	0.34	B 8 p	5 11 19.014	+2.8831	+ 2	— 8 16 39.92	+4.226	0
191	19 H. Camelop.	5.16	F 8	5 11 28.582	+9.8637	—310	+79 9 31.14	+4.373	+161
193	α Aurigae	0.21	G 0	5 11 44.177	+4.4313	+ 84	+45 55 54.55	+3.762	—428
196	ϑ Doradus	4.78	K 0	5 13 48.232	—0.0494	+ 15	—67 15 38.45	+4.052	+ 39
195	[τ Orionis]	3.68	B 5	5 14 21.129	+2.9129	— 12	— 6 54 55.82	+3.959	— 7
197	[ο Columbae]	4.91	K 0	5 15 4.005	+2.1628	+ 62	—34 57 34.63	+3.576	—329
198	[Columb. 12 G.]	5.75	A 0	5 16 43.461	+2.3923	+ 8	—27 26 12.19	+3.751	— 11
199	[ζ Pictoris]	5.52	F 8	5 17 43.379	+1.4703	+ 9	—50 40 38.30	+3.903	+227

Nr. 165. Doppelstern, Größe der Komponenten: 5.86 und 6.61

Nr. 183. Größe: Max. 3.4, Min. 4.1

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
200	[η Orion. med.]	3.44	B 1	5 21 6.474	+3.0169	+ 5	− 2 27 26.64	+3.386	+ 1
201	γ Orionis	1.70	B 2	5 21 32.195	+3.2179	− 3	+ 6 17 25.13	+3.328	− 20
202	β Tauri	1.78	B 8	5 22 3.306	+3.7926	+ 25	+28 33 9.21	+3.127	−177
203	17 Camelop.	5.75	K 5	5 23 50.160	+5.6642	− 3	+63 0 49.76	+3.148	− 1
204	[β Leporis]	2.96	G 0	5 25 22.478	+2.5712	+ 4	−20 48 42.47	+2.924	− 93
206	δ Orionis	2.48 6.87	B 0	5 28 34.957	+3.0649	0	− 0 20 50.51	+2.737	− 2
207	α Leporis	2.69	F 0	5 29 46.470	+2.6461	+ 2	−17 52 8.69	+2.638	+ 2
205	Grb 966	6.36	K 5	5 30 45.265	+8.0197	− 8	+75 0 10.98	+2.570	+ 20
208	[φ¹ Orionis]	4.53	B 0	5 31 8.479	+3.2934	− 1	+ 9 26 44.08	+2.507	− 10
209	ι Orionis	2.87	Oe 5	5 32 9.313	+2.9351	+ 4	− 5 57 9.51	+2.425	− 4
210	ε Orionis	1.75	B 0	5 32 48.773	+3.0442	+ 1	− 1 14 36.15	+2.369	− 3
212	β Doradus	3.81	F 5 p	5 33 2.464	+0.5188	− 13	−62 32 0.50	+2.350	− 2
211	ζ Tauri	3.00	B 3 p	5 33 38.377	+3.5858	+ 6	+21 6 11.69	+2.275	− 26
214	[γ Mensae]	5.06	K 0	5 34 31.544	−2.3837	+284	−76 23 22.83	+2.521	+298
213	[σ Orionis]	3.78	B 0	5 35 22.907	+3.0118	0	− 2 38 14.66	+2.148	− 1
215	α Columbae	2.75	B 5 p	5 37 13.301	+2.1722	− 2	−34 6 32.43	+1.952	− 37
216	ο Aurigae	5.52	A 0	5 40 42.508	+4.6480	− 6	+49 47 56.39	+1.677	− 9
217	[γ Leporis]	3.80	F 8	5 41 40.231	+2.5019	−201	−22 28 9.09	+1.226	−375
218	[130 Tauri]	5.51	F 0	5 43 31.787	+3.4988	+ 4	+17 42 20.22	+1.433	− 6
219	ζ Leporis	3.67	A 2	5 43 55.140	+2.7184	− 12	−14 50 44.50	+1.404	− 2
220	κ Orionis	2.20	B 0	5 44 34.706	+2.8456	+ 4	− 9 41 31.74	+1.345	− 3
221	[ν Aurigae]	4.18	K 0	5 46 50.704	+4.1579	− 4	+39 7 50.90	+1.161	+ 11
222	[δ Leporis]	3.90	K 0	5 48 26.379	+2.5802	+165	−20 53 1.29	+0.358	−653
223	[β Columbae]	3.22	K 0	5 48 35.780	+2.1141	+ 34	−35 47 33.03	+1.401	+404
224	α Orionis	0.92	M a	5 51 32.642	+3.2483	+ 20	+ 7 23 46.03	+0.753	+ 13
226	[η Leporis]	3.77	F 0	5 53 21.181	+2.7328	− 27	−14 10 43.29	+0.721	+140
225	δ Aurigae	3.88	K 0	5 54 0.610	+4.9407	+100	+54 16 54.67	+0.402	−122
227	β Aurigae	2.07	A 0 p	5 54 36.860	+4.4020	− 42	+44 56 33.21	+0.463	− 8
228	ϑ Aurigae	2.71	A 0 p	5 55 9.158	+4.0922	+ 49	+37 12 34.79	+0.337	− 87
229	η Columbae	4.03	K 0	5 57 5.752	+1.8371	+ 22	−42 49 5.85	+0.220	− 34
230	[66 Orionis]	5.70	K 0	6 1 25.920	+3.1696	− 6	+ 4 9 49.47	−0.140	− 15
231	[Puppis 1 G.]	6.22	F 8	6 2 32.694	+1.7268	− 83	−45 2 8.29	+0.009	+232
232	ν Orionis	4.40	B 2	6 3 44.810	+3.4265	+ 11	+14 46 40.35	−0.359	− 31
233	[36 Camelop.]	5.39	K 0	6 6 6.619	+6.0357	− 6	+65 44 4.15	−0.563	− 29
235	[δ Pictoris]	4.84	B 1	6 8 59.524	+1.1671	− 22	−54 57 11.84	−0.794	− 7
236	*η Geminor.	var.	M a	6 10 50.024	+3.6224	− 42	+22 31 40.40	−0.960	− 13
234	22 H. Camelop.	4.73	A 0	6 11 28.042	+6.6151	+ 15	+69 20 47.41	−1.105	−102
239	[α Mensae]	5.14	K 0	6 12 13.948	−1.7917	+234	−74 43 51.61	−1.296	−226
237	[2 Lyncis]	4.42	A 0	6 13 42.817	+5.2956	− 7	+59 2 15.56	−1.169	+ 29
238	[κ Columbae]	4.51	K 0	6 14 10.080	+2.1344	− 6	−35 7 2.55	−1.164	+ 74

Nr. 236. Größe: Max. 3.3, Min. 4.2

Mittlere Sternörter 1933.0

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
240	ζ Canis maj.	3.10	B 3	6 17 44.420	+ 2.3029	+ 2	−30 1 57.04	−1.546	+ 4
241	μ Geminor.	3.19	M a	6 18 54.478	+ 3.6307	+ 48	+22 32 58.77	−1.763	− 111
242	ψ¹ Aurigae	5.10	K 2	6 19 44.422	+ 4.6230	+ 9	+49 19 27.16	−1.727	− 3
243	β Canis maj.	1.99	B 1	6 19 44.923	+ 2.6420	− 4	−17 55 17.12	−1.723	+ 2
244	8 Monocer.	4.48 6.54	A 5	6 20 13.090	+ 3.1800	− 7	+ 4 37 41.71	−1.762	+ 4
245	α Argus	−0.86	F 0	6 22 27.797	+ 1.3315	+ 16	−52 39 30.67	−1.950	+ 11
246	10 Monocer.	4.98	B 3	6 24 39.068	+ 2.9630	− 2	− 4 43 9.73	−2.147	+ 5
247	8 Lyncis	6.05	G 0	6 31 34.321	+ 5.4866	−285	+61 32 33.05	−3.029	− 277
249	ξ² Canis maj.	4.54	A 0	6 32 14.870	+ 2.5143	+ 5	−22 54 38.18	−2.798	+ 13
251	γ Geminor.	1.93	A 0	6 33 50.532	+ 3.4668	+ 34	+16 27 28.80	−2.995	− 46
250	51 Aurigae	5.71	K 0	6 34 1.081	+ 4.1587	− 18	+39 27 6.19	−3.079	− 114
248	23 H. Camelop.	5.60	F 8	6 34 50.037	+10.2695	−298	+79 38 29.39	−3.657	− 622
252	ν Argus	3.18	B 8	6 35 42.642	+ 1.8357	− 4	−43 8 11.55	−3.131	− 20
253	*S Monocer.	4.68	Oe 5	6 37 17.346	+ 3.3051	+ 6	+ 9 57 33.09	−3.252	− 5
254	ε Geminor.	3.18	G 5	6 39 48.697	+ 3.6926	+ 3	+25 11 56.85	−3.479	− 15
256	ξ Geminor.	3.40	F 5	6 41 31.793	+ 3.3682	− 75	+12 58 9.36	−3.811	− 199
255	[ψ⁵ Aurigae]	5.34	G 0	6 41 54.790	+ 4.3269	+ 7	+43 38 45.30	−3.491	+ 154
257	*α Canis maj.	−1.58	A 0	6 42 11.835	+ 2.6437	−371	−16 37 23.00	−4.881	−1211
258	18 Monocer.	4.70	K 0	6 44 22.105	+ 3.1297	− 2	+ 2 29 12.37	−3.876	− 20
264	[ζ Mensae]	5.64	A 2	6 45 39.260	− 4.9686	− 33	−80 44 40.96	−3.882	+ 85
259	[43 Camelop.]	5.13	B 5	6 46 29.509	+ 6.4789	+ 16	+68 58 8.38	−4.035	+ 3
262	α Pictoris	3.30	A 5	6 47 30.320	+ 0.6171	−100	−61 52 9.01	−3.869	+ 256
263	[τ Argus]	2.83	K 0	6 48 16.399	+ 1.4887	+ 29	−50 32 3.92	−4.287	− 96
261	ϑ Geminor.	3.64	A 2	6 48 22.534	+ 3.9565	+ 7	+34 2 37.40	−4.254	− 55
260	[24 H. Camel.]	4.75	K 5	6 50 19.407	+ 8.7737	+216	+77 3 59.73	−4.380	− 14
266	ϑ Canis maj.	4.25	K 2	6 51 4.627	+ 2.7877	− 94	−11 57 12.47	−4.444	− 13
265	15 Lyncis	4.54	G 0	6 51 28.879	+ 5.1998	− 1	+58 30 46.46	−4.595	− 130
267	[ι Volantis]	5.52	B 8	6 52 13.335	− 0.6825	− 4	−70 52 49.05	−4.516	+ 12
268	ε Canis maj.	1.63	B 1	6 55 59.513	+ 2.3578	0	−28 52 47.46	−4.847	+ 1
269	*ζ Geminor.	var.	G 0 p	7 0 8.212	+ 3.5598	0	+20 40 12.59	−5.202	− 3
270	[o² Canis maj.]	3.12	B 5 p	7 0 13.599	+ 2.5054	− 2	−23 44 3.56	−5.207	0
271	γ Canis maj.	4.07	B 5	7 0 43.673	+ 2.7153	+ 8	−15 31 59.28	−5.262	− 12
272	[Carinae 27 G.]	5.30	A 0	7 3 3.302	+ 1.1166	− 24	−56 38 51.10	−5.453	− 7
273	δ Canis maj.	1.98	F 8 p	7 5 39.979	+ 2.4391	− 8	−26 17 8.74	−5.661	+ 3
274	63 Aurigae	5.07	K 2	7 7 3.042	+ 4.1296	+ 45	+39 25 53.94	−5.780	0
275	[J Puppis]	4.47	F 0	7 10 38.937	+ 1.7096	−147	−46 38 48.32	−5.991	+ 91
276	[64 Aurigae]	5.75	A 3	7 13 22.969	+ 4.1753	− 3	+41 0 14.47	−6.305	+ 3
277	λ Geminor.	3.65	A 2	7 14 14.647	+ 3.4490	− 31	+16 39 45.61	−6.424	− 44
278	π Argus	2.74	K 5	7 14 46.535	+ 2.1186	− 14	−36 58 34.60	−6.422	+ 3
279	δ Geminor.	3.51	F 0	7 16 7.441	+ 3.5850	− 11	+22 6 26.36	−6.546	− 10

Nr. 253. Doppelstern, Größe der Komponenten: 6.0 und 8.8 Nr. 257. Ort des Schwerpunktes. Die Reduktion auf den Hauptstern ist nach den Elementen von Auwers A. N. 3085

1933.0 $\Delta\alpha = -0^s.126$ $\Delta\delta = -2''.24$

1934.0 $= -0.111$ $= -2.20$

Nr. 269. Größe: Max. 3.7, Min. 4.3

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
281	δ Volantis	4.02	F 5	7 16 52.282	−0.0240	+ 4	−67 50 5.07	− 6.610	− 12
280	19 Lyncis seq.	5.61	B 8	7 17 24.509	+4.9011	− 1	+55 24 34.95	− 6.676	− 34
283	[η Can. maj.]	2.43	B 5 p	7 21 26.679	+2.3731	− 5	−29 10 16.40	− 6.961	+ 13
282	ι Geminor.	3.89	K 0	7 21 34.116	+3.7287	− 83	+27 55 58.37	− 7.069	− 85
285	β Canis min.	3.09	B 8	7 23 31.123	+3.2547	− 31	+ 8 25 32.61	− 7.184	− 40
284	Grb 1308	5.80	K 0	7 23 55.587	+6.2568	− 7	+68 36 18.43	− 7.221	− 44
286	ρ Geminor.	4.18	F 0	7 24 48.313	+3.8612	+122	+31 55 10.19	− 7.066	+ 183
287	*α Geminor.	2.85 1.99	A 0	7 30 19.615	+3.8322	−129	+32 2 15.26	− 7.778	− 81
288	[Pupp. 108 G.]	4.52	F 8	7 31 11.062	+2.5675	− 39	−22 9 2.25	− 7.748	+ 18
289	25 Monocer.	5.17	F 5	7 33 56.858	+2.9834	− 47	− 3 57 36.37	− 7.969	+ 20
290	[*f* Puppis]	4.62	B 8	7 34 53.307	+2.2195	− 27	−34 49 0.62	− 8.048	+ 16
291	*α Canis min.	0.48	F 5	7 35 47.750	+3.1413	−470	+ 5 23 53.02	− 9.164	−1027
292	24 Lyncis	4.96	A 2	7 37 20.954	+5.0841	− 47	+58 52 9.20	− 8.314	− 53
293	[26 Monocer.]	4.07	K 0	7 38 2.753	+2.8661	− 57	− 9 23 37.14	− 8.337	− 21
294	κ Geminor.	3.68	G 5	7 40 24.363	+3.6244	− 15	+24 33 36.65	− 8.557	− 54
295	β Geminor.	1.21	K 0	7 41 13.165	+3.6736	−468	+28 11 22.34	− 8.620	− 52
297	ζ Volantis	3.89	K 0	7 42 39.166	−0.7337	+ 8	−72 26 43.84	− 8.673	+ 8
296	π Geminor.	5.29	K 2	7 43 11.470	+3.8717	− 1	+33 34 54.19	− 8.754	− 31
298	[Pupp. 205 G.]	5.34	G 0	7 48 40.180	+2.7786	− 41	−13 43 8.87	− 9.494	− 343
299	[26 Lyncis]	5.69	K 0	7 49 50.460	+4.3738	− 40	+47 44 23.98	− 9.249	− 6
301	[α Puppis]	3.76	G 5	7 49 54.788	+2.0621	− 18	−40 24 7.67	− 9.248	+ 1
300	Grb 1374	5.56	K 0	7 52 12.793	+7.2097	− 31	+74 5 59.43	− 9.459	− 32
303	χ Argus	3.60	B 3	7 55 4.583	+1.5265	− 32	−52 48 6.67	− 9.623	+ 24
302	[53 Camelop.]	6.00	A 2 p	7 56 0.037	+5.1364	− 30	+60 30 34.60	− 9.739	− 21
304	[27 Monocer.]	5.06	K 0	7 56 23.430	+2.9989	− 27	− 3 29 44.01	− 9.738	+ 9
305	χ Geminor.	5.04	K 0	7 59 24.430	+3.6873	− 15	+27 59 1.07	−10.023	− 46
306	ζ Argus	2.27	O d	8 1 13.690	+2.1079	− 34	−39 48 48.86	−10.104	+ 10
307	27 Lyncis	4.87	A 2	8 3 25.634	+4.5196	− 59	+51 42 5.69	−10.285	− 4
308	ι Navis	2.88	F 5	8 4 41.409	+2.5549	− 64	−24 6 36.59	−10.328	+ 47
309	γ Argus	2.22	O a p	8 7 28.027	+1.8488	− 12	−47 8 18.49	−10.587	− 4
311	20 Navis	5.05	G 5	8 10 15.219	+2.7580	− 8	−15 35 7.13	−10.794	− 6
310	Br 1147	5.73	G 5	8 11 10.458	+7.5722	+ 58	+75 57 51.65	−10.840	+ 17
312	β Cancri	3.76	K 2	8 12 53.024	+3.2549	− 30	+ 9 23 35.76	−11.033	− 52
313	[*q* Puppis]	4.43	A 5	8 16 2.730	+2.2444	−104	−36 27 3.07	−11.123	+ 89
314	31 Lyncis	4.43	K 5	8 18 15.388	+4.1129	− 8	+43 24 16.18	−11.479	− 108
315	ε Argus	1.74	K 0 + B	8 21 8.493	+1.2332	− 32	−59 17 35.94	−11.563	+ 15
316	Br 1197	3.95	A 0	8 22 18.833	+2.9988	− 41	− 3 41 12.05	−11.683	− 21
318	ϑ Chamael.	4.26	K 0	8 22 40.854	−1.7778	−458	−77 16 8.49	−11.657	+ 31
317	ο Ursae maj.	3.47	G 0	8 24 42.894	+4.9969	−174	+60 56 38.35	−11.943	− 110
319	[β Volantis]	3.65	K 0	8 25 0.833	+0.6570	− 55	−65 54 47.52	−12.030	− 177

Nr. 287. Rektaszension der Mitte, Deklination des folgenden, helleren Sterns. Nr. 291. Ort des Schwerpunktes. Die Reduktion auf den Ort des hellen Sterns beträgt nach den Elementen von Auwers A. N. 3929

1933.0 $\Delta\alpha = +0^s.067$ $\Delta\delta = -0''.06$

1934.0 $= +0\ .067$ $= -0\ .17$

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
320	Grb 1450	6.05	K 0	8 28 34.035	+3.9043	− 83	+38 14 51.43	−12.272	−170
321	η Cancri	5.52	K 0	8 28 50.273	+3.4719	− 26	+20 40 12.02	−12.171	− 50
322	[Grb 1446]	6.29	K 0	8 32 18.225	+6.7056	− 37	+73 51 58.56	−12.466	−104
323	[Grb 1460]	6.03	K 0	8 34 20.416	+4.4527	− 38	+52 56 52.50	−12.536	− 35
324	[e Velorum]	4.13	A 5	8 35 17.190	+2.1082	− 22	−42 45 14.62	−12.573	− 7
325	[6 Hydrae]	5.15	K 2	8 36 50.990	+2.8420	− 64	−12 14 15.00	−12.674	− 3
326	δ Cancri	4.17	K 0	8 40 52.850	+3.4115	− 9	+18 24 6.10	−13.179	−236
327	α Pyxidis	3.70	B 2	8 40 53.948	+2.4103	− 15	−32 56 38.24	−12.932	+ 12
328	ι Cancri	6.61, 4.20	A 5, G 5	8 42 38.868	+3.6338	− 12	+29 0 22.40	−13.108	− 47
330	δ Argus	2.01	A 0	8 42 51.231	+1.6571	+ 22	−54 27 45.18	−13.168	− 93
329	[ε Hydrae]	3.48	F 8	8 43 13.800	+3.1786	− 126	+ 6 39 56.76	−13.149	− 50
331	[η Chamael.]	5.62	B 9	8 43 38.607	−2.0053	− 151	−78 43 14.45	−13.093	+ 34
332	[γ Pyxidis]	4.19	K 2	8 47 41.282	+2.5463	− 99	−27 27 37.30	−13.298	+ 94
333	[σ²Cancri med.]	5.60	K 0	8 50 9.718	+3.6637	+ 31	+30 50 3.51	−13.578	− 26
334	ζ Hydrae	3.30	K 0	8 51 51.244	+3.1728	− 64	+ 6 12 5.80	−13.649	+ 12
336	c Carinae	3.98	B 8	8 53 31.869	+1.3616	− 26	−60 23 16.47	−13.716	+ 52
335	ι Ursae maj.	3.12	A 5	8 54 37.840	+4.1146	− 437	+48 18 21.33	−14.084	−247
337	α Cancri	4.27	A 3	8 54 49.533	+3.2830	+ 26	+12 7 5.38	−13.885	− 35
339	10 Ursae maj.	4.09	F 5	8 56 17.958	+3.9006	− 383	+42 2 57.06	−14.206	−264
338	[ρ Ursae maj.]	4.99	M a	8 56 31.921	+5.4306	− 34	+67 53 32.86	−13.943	+ 15
341	ϰ Ursae maj.	3.68	A 0	8 59 3.675	+4.1028	− 27	+47 25 21.91	−14.180	− 65
340	[Grb 1501]	5.68	A 2	8 59 6.640	+4.4044	− 8	+54 32 57.78	−14.116	+ 3
343	α Volantis	4.18	A 5	9 1 23.610	+0.9501	− 8	−66 7 42.53	−14.373	−114
342	[c Velorum]	3.69	K 0	9 1 50.455	+2.0668	− 70	−46 49 49.67	−14.314	− 28
344	σ² Ursae maj.	4.87	F 8	9 4 31.481	+5.2969	− 16	+67 24 29.98	−14.518	− 67
345	λ Argus	2.22	K 5	9 5 31.756	+2.2052	− 33	−43 9 40.83	−14.502	+ 9
346	[36 Lyncis]	5.30	B 8	9 9 25.836	+3.9300	− 18	+43 29 42.35	−14.787	− 42
347	ϑ Hydrae	3.84	A 0	9 10 52.813	+3.1226	+ 89	+ 2 35 52.38	−15.143	−313
348	β Argus	1.80	A 0	9 12 28.355	+0.6641	− 304	−69 26 27.75	−14.826	+ 97
349	[38 Lyncis]	3.82	A 2	9 14 40.937	+3.7382	− 18	+37 5 14.03	−15.181	−129
350	*83 Cancri	6.60	F 5	9 15 14.728	+3.3507	− 80	+17 59 25.31	−15.219	−135
351	[ι Argus]	2.25	F 0	9 15 17.762	+1.6056	− 35	−58 59 37.03	−15.085	+ 2
352	40 Lyncis	3.30	K 5	9 16 58.773	+3.6587	− 178	+34 40 36.95	−15.171	+ 12
353	ϰ Argus	2.63	B 3	9 20 2.231	+1.8568	− 22	−54 43 26.32	−15.355	+ 2
354	α Hydrae	2.16	K 2	9 24 17.740	+2.9487	− 7	− 8 22 2.32	−15.561	+ 32
355	h Ursae maj.	3.75	F 0	9 26 16.150	+4.7452	+ 168	+63 21 22.22	−15.674	+ 28
356	[ε Antliae]	4.64	K 2	9 26 28.692	+2.4752	− 25	−35 39 27.76	−15.727	− 14
359	ψ Argus	3.64	F 5	9 28 3.537	+2.3614	− 172	−40 10 21.43	−15.724	+ 74
358	ϑ Ursae maj.	3.26	F 8 p	9 28 23.300	+4.0204	−1027	+51 59 1.50	−16.361	−545
357	d Ursae maj.	4.57	G 0	9 28 35.585	+5.3293	− 120	+70 7 34.80	−15.752	+ 75

Nr. 350. Größe aus Harvard 54 entnommen.

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Verände-rung	Jährl. Eigen-bew. in 0s.0001	Dekl. 1933.0	Jährl. Verände-rung	Jährl. Eigen-bew. in 0".001
		M		h m s	s		° ' "	"	
361	[N Velorum]	3.04	K 5	9 29 11.166	+1.8234	− 36	−56 44 17.43	−15.857	+ 1
360	10 Leon. min.	4.62	G 5	9 30 7.565	+3.6800	+ 13	+36 41 45.84	−15.935	− 26
362	[H. Carinae]	5.52	K 2	9 31 6.892	+0.4583	− 61	−72 47 1.32	−15.978	− 17
363	[Grb 1564]	5.74	K 0	9 36 32.690	+5.1585	−131	+69 32 37.69	−16.318	− 74
364	[κ Hydrae]	4.96	B 3	9 37 5.651	+2.8762	− 18	−14 1 38.61	−16.283	− 11
365	[o Leonis]	3.76	F 5 + A 3	9 37 34.638	+3.2035	− 94	+10 11 52.87	−16.334	− 37
366	ϑ Antliae	4.98	F 5 p	9 41 12.824	+2.6736	− 40	−27 27 43.16	−16.445	+ 35
367	ε Leonis	3.12	G 0 p	9 42 3.153	+3.4081	− 31	+24 5 0.95	−16.539	− 17
369	υ Argus	3.15 6.03	F 0	9 45 25.683	+1.5004	− 21	−64 45 38.90	−16.688	− 1
368	υ Ursae maj.	3.89	F 0	9 46 14.586	+4.2779	−379	+59 21 17.92	−16.880	−154
370	6 Sextantis	6.00	A 2	9 47 51.505	+3.0237	+ 8	− 3 55 42.99	−16.834	− 30
371	[μ Leonis]	4.10	K 0	9 48 57.456	+3.4145	−162	+26 19 24.22	−16.912	− 56
373	[Hydrae 183 G.]	5.16	M a	9 51 42.608	+2.8304	− 25	−18 41 29.73	−17.051	− 66
372	Grb 1586	5.96	K 0	9 52 26.183	+5.3931	−179	+73 11 57.50	−17.064	− 45
374	[19 Leon. min.]	5.19	F 5	9 53 35.357	+3.6797	−100	+41 22 32.05	−17.098	− 27
375	[φ Argus]	3.70	B 5	9 54 30.467	+2.1046	− 21	−54 14 54.08	−17.116	− 2
377	[η Antliae]	5.25	F 0	9 55 59.638	+2.5725	− 83	−35 34 10.84	−17.205	− 24
376	[12 Sextantis]	6.63	A 5	9 56 14.640	+3.1127	− 47	+ 3 42 21.26	−17.165	+ 27
378	π Leonis	4.89	M a	9 56 40.496	+3.1716	− 21	+ 8 21 59.13	−17.236	− 25
379	η Leonis	3.58	A 0 p	10 3 40.970	+3.2724	− 2	+17 5 24.28	−17.524	− 6
380	α Leonis	1.34	B 8	10 4 48.382	+3.1966	−167	+12 17 43.10	−17.566	− 1
381	λ Hydrae	3.83	K 0	10 7 19.312	+2.9252	−134	−12 1 19.97	−17.757	− 87
382	q Velorum	4.09	A 2	10 11 55.133	+2.5150	−154	−41 47 21.84	−17.811	+ 45
385	[ω Argus]	3.56	B 8	10 12 9.018	+1.4318	− 29	−69 42 17.59	−17.866	0
384	ζ Leonis	3.65	F 0	10 12 58.086	+3.3392	+ 15	+23 45 6.94	−17.905	− 7
383	λ Ursae maj.	3.52	A 2	10 13 3.882	+3.6237	−148	+43 14 58.56	−17.950	− 49
386	μ Ursae maj.	3.21	K 5	10 18 20.752	+3.5794	− 70	+41 50 13.47	−18.080	+ 24
387	30 H. Urs. maj.	4.92	A 0	10 19 19.398	+4.3412	− 25	+65 54 22.00	−18.160	− 18
388	[25 Sextantis]	6.10	B 9	10 20 3.298	+3.0321	− 40	− 3 44 5.72	−18.171	− 2
389	μ Hydrae	4.06	K 5	10 22 50.972	+2.9017	− 85	−16 29 37.43	−18.352	− 82
391	J Carinae	4.08	F 5	10 23 4.092	+1.1918	− 67	−73 41 24.57	−18.295	− 17
390	31 Leon. min.	4.41	K 0	10 24 0.969	+3.4736	− 96	+37 3 4.27	−18.418	−106
392	Lac. α Antliae	4.42	K 5	10 24 5.010	+2.7439	− 62	−30 43 34.04	−18.304	+ 10
393	s Carinae	4.08	F 0	10 25 24.875	+2.1987	− 32	−58 23 49.04	−18.375	− 14
394	36 Ursae maj.	4.84	F 5	10 26 21.179	+3.8482	−216	+56 19 29.38	−18.427	− 33
396	[ρ Leonis]	3.85	B 0 p	10 29 17.112	+3.1600	− 6	+ 9 39 6.96	−18.499	− 5
395	9 H. Dracon.	5.04	G 5	10 29 27.151	+5.1353	− 96	+76 3 32.48	−18.504	− 4
397	[p Carinae]	3.58	B 5 p	10 29 38.344	+2.1320	− 18	−61 20 24.87	−18.501	+ 5
399	[44 Hydrae]	5.32	K 2	10 30 49.605	+2.8534	− 2	−23 23 57.85	−18.525	+ 21
398	[37 Ursae maj.]	5.16	F 0	10 30 51.657	+3.8744	+ 83	+57 25 42.15	−18.511	+ 36

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Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ′ ″	″	
400	*[p Velorum]	4.06	F 2 + A 3	10 34 28.745	+2.5159	−183	−47 52 38.51	−18.698	− 34
401	[γ Chamael.]	4.10	M a	10 34 41.598	+0.7229	−116	−78 15 35.65	−18.642	+ 30
402	[x Velorum]	4.37	G o	10 36 37.856	+2.3800	− 75	−55 15 14.99	−18.753	− 21
404	33 Sextantis	6.40	K o	10 37 59.713	+3.0522	− 94	− 1 23 20.05	−18.900	−125
403	[35 H.Urs. maj.]	5.23	K o	10 38 17.856	+4.3136	− 19	+69 25 38.13	−18.802	− 18
405	[41 Leon. min.]	5.05	A 2	10 39 46.636	+3.2645	− 80	+23 32 23.18	−18.816	+ 13
406	ϑ Argus	3.03	B o	10 40 33.741	+2.1378	− 26	−64 2 34.96	−18.848	+ 4
407	42 Leon. min.	5.37	B 9	10 42 8.699	+3.3394	− 15	+31 2 8.65	−18.936	− 37
408	μ Argus	2.84	G 5	10 43 52.881	+2.5755	+ 49	−49 3 57.26	−19.013	− 65
411	[δ² Chamael.]	4.62	B 3	10 45 10.774	+0.5835	−120	−80 11 11.78	−18.976	+ 9
409	l Leonis	5.27	A o	10 45 44.249	+3.1546	− 3	+10 54 0.50	−19.031	− 30
410	[ν Hydrae]	3.32	K o	10 46 19.071	+2.9597	+ 66	−15 50 33.61	−18.823	+194
412	[46 Leon. min.]	3.92	K o	10 49 34.261	+3.3591	+ 76	+34 34 35.54	−19.387	−282
414	[ι Antliae]	4.70	K o	10 53 35.501	+2.7937	+ 62	−36 46 38.27	−19.346	−137
413	[Br 1508]	6.26	G 5	10 54 38.984	+4.8355	−258	+78 7 46.90	−19.261	− 26
415	i Velorum	4.56	A 2	10 57 4.563	+2.7502	+ 20	−41 51 58.43	−19.297	− 4
416	β Ursae maj.	2.44	A o	10 57 48.711	+3.6291	+101	+56 44 30.88	−19.284	+ 26
417	α Ursae maj.	1.95	K o	10 59 36.578	+3.7132	−174	+62 6 46.97	−19.424	− 72
418	χ Leonis	4.66	F o	11 1 33.743	+3.0955	−231	+ 7 41 55.02	−19.442	− 46
419	[χ Hydrae]	5.06	F 5	11 2 6.001	+2.8879	−154	−26 55 53.98	−19.414	− 7
420	ψ Ursae maj.	3.15	K o	11 5 54.299	+3.3782	− 57	+44 51 44.31	−19.524	− 36
421	β Crateris	4.52	A 2	11 8 21.614	+2.9495	0	−22 27 34.82	−19.635	− 98
422	δ Leonis	2.58	A 3	11 10 32.903	+3.1928	+106	+20 53 27.79	−19.716	−136
423	ϑ Leonis	3.41	A o	11 10 43.586	+3.1493	− 43	+15 47 45.87	−19.664	− 81
424	[Grb 1757]	5.97	K o	11 12 55.829	+3.3862	− 97	+49 50 31.55	−19.645	− 22
425	ν Ursae maj.	3.71	K o	11 14 51.927	+3.2441	− 16	+33 27 36.40	−19.635	+ 22
426	δ Crateris	3.82	K o	11 15 59.345	+2.9986	− 88	−14 24 56.70	−19.475	+200
427	σ Leonis	4.13	A o	11 17 40.960	+3.0942	− 62	+ 6 23 48.48	−19.715	− 12
428	π Centauri	4.26	B 5	11 17 56.666	+2.7317	− 41	−54 7 25.10	−19.721	− 13
429	Grb 1771	5.98	A o	11 18 53.469	+3.5762	− 10	+64 41 50.87	−19.688	+ 34
430	[ι Leonis]	4.03	F 5	11 20 25.963	+3.1278	+106	+10 53 54.29	−19.830	− 84
431	[γ Crateris]	4.14	A 5	11 21 31.949	+2.9962	− 72	−17 18 56.52	−19.756	+ 7
432	[58 Ursae maj.]	5.88	F 8	11 26 54.038	+3.2514	− 43	+43 32 28.04	−19.764	+ 72
433	λ Draconis	4.06	M a	11 27 26.932	+3.5764	− 79	+69 42 3.71	−19.864	− 21
434	ξ Hydrae	3.72	G 5	11 29 42.126	+2.9483	−167	−31 29 12.26	−19.912	− 43
435	[C² Centauri]	5.42	F o	11 32 40.246	+2.9021	+ 13	−47 16 11.56	−19.949	− 47
436	λ Centauri	3.34	B 9	11 32 40.838	+2.7599	− 58	−62 38 56.40	−19.919	− 17
437	υ Leonis	4.47	K o	11 33 31.088	+3.0718	+ 1	− 0 27 13.53	−19.874	+ 36
438	[π Chamael.]	5.74	F o	11 34 29.278	+2.4699	−280	−75 31 31.76	−19.925	− 5
439	[ο Hydrae]	4.88	B 8	11 36 52.870	+2.9779	− 30	−34 22 23.43	−19.941	+ 1

Nr. 400 Doppelstern, Größe der Komponenten: 4.5 und 5.0

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
440	3 Draconis	5.48	K 0	11 38 45.187	+3.3583	− 78	+67 6 57.24	−19.919	+ 40
442	[λ Muscae]	3.80	A 5	11 42 25.991	+2.8239	−153	−66 21 26.33	−19.965	+ 20
441	χ Ursae maj.	3.85	K 0	11 42 31.227	+3.1733	−133	+48 9 3.28	−19.966	+ 20
443	[Centauri 65 G.]	4.22	G 0	11 43 15.789	+2.8959	− 25	−60 48 21.42	−20.026	− 35
444	β Leonis	2.23	A 2	11 45 38.632	+3.0612	−341	+14 56 47.97	−20.122	−118
445	β Virginis	3.80	F 8	11 47 12.313	+3.1252	+494	+ 2 8 32.28	−20.289	−276
446	[B Centauri]	4.71	K 0	11 47 47.137	+2.9911	−111	−44 48 3.46	−20.062	− 46
447	γ Ursae maj.	2.54	A 0	11 50 18.941	+3.1616	+107	+54 4 1.97	−20.024	+ 2
448	[ε Chamael.]	5.05	B 9	11 56 16.195	+2.9558	−162	−77 50 55.45	−20.050	− 9
449	[Centauri 88 G.]	5.28	F 0	12 0 10.836	+3.1006	+267	−42 3 32.23	−20.167	−122
450	ο Virginis	4.24	G 5	12 1 47.814	+3.0565	−147	+ 9 6 17.88	−20.005	+ 38
451	[Grb 1852]	5.96	K 0	12 1 52.292	+3.0682	+435	+77 16 49.25	−20.140	− 96
452	δ Centauri	2.88	B 3 p	12 4 52.613	+3.1029	− 44	−50 20 57.51	−20.058	− 18
453	ε Corvi	3.21	K 0	12 6 40.516	+3.0838	− 51	−22 14 49.83	−20.025	+ 11
454	4 H. Draconis	5.12	A 5	12 9 4.979	+2.8264	+ 23	+77 59 18.60	−20.005	+ 23
455	[δ Crucis]	3.08	B 3	12 11 34.537	+3.1774	− 51	−58 22 35.24	−20.045	− 27
456	δ Ursae maj.	3.44	A 2	12 12 7.180	+2.9760	+135	+57 24 16.97	−20.013	+ 3
457	[γ Corvi]	2.78	B 8	12 12 21.446	+3.0840	−112	−17 10 12.19	−19.998	+ 17
458	[2 Can. ven.]	5.80	K 5	12 12 46.468	+3.0107	+ 26	+41 1 58.42	−20.058	− 45
459	β Chamael.	4.38	B 5	12 14 22.556	+3.4872	−143	−78 56 25.03	−19.993	+ 12
460	η Virginis	4.00	A 0	12 16 28.641	+3.0692	− 42	− 0 17 40.60	−20.015	− 23
461	[6 Can. ven.]	5.22	K 0	12 22 33.163	+2.9585	− 67	+39 23 24.59	−19.983	− 36
462	α Crucis med.	1.58 2.09	B 1	12 22 51.698	+3.3267	− 44	−62 43 42.20	−19.976	− 31
463	[Hydr. 323 G.]	5.68	A 0	12 23 19.466	+3.1579	− 14	−32 27 32.57	−19.989	− 49
464	[σ Centauri]	4.16	B 3	12 24 24.419	+3.2378	− 36	−49 51 35.45	−19.963	− 33
466	20 Comae	5.72	A 2	12 26 21.437	+3.0158	+ 26	+21 16 0.73	−19.950	− 39
465	δ Corvi	3.11	A 0	12 26 23.677	+3.1029	−145	−16 8 33.44	−20.053	−142
467	[74 Ursae maj.]	5.44	A 5	12 26 49.990	+2.8058	− 96	+58 46 27.01	−19.819	+ 88
468	[γ Crucis]	1.61	Mb	12 27 26.196	+3.3188	+ 26	−56 44 18.01	−20.178	−278
469	[γ Muscae]	4.04	B 5	12 28 26.543	+3.5667	− 82	−71 45 47.64	−19.911	− 22
470	8 Can. ven.	4.32	G 0	12 30 33.942	+2.8521	−624	+41 43 16.32	−19.586	+280
472	κ Draconis	3.88	B 5 p	12 30 38.026	+2.5678	−117	+70 9 26.33	−19.858	+ 7
471	β Corvi	2.84	G 5	12 30 51.775	+3.1487	− 4	−23 1 35.30	−19.921	− 59
473	24 Comae seq.	5.18	K 0	12 31 46.243	+3.0105	+ 2	+18 44 44.34	−19.833	+ 18
474	α Muscae	2.94	B 3	12 33 10.108	+3.5634	− 56	−68 46 0.44	−19.866	− 32
475	[χ Virginis]	4.78	K 0	12 35 47.185	+3.0958	− 49	− 7 37 37.99	−19.837	− 37
476	γ Centauri	2.38	A 0	12 37 48.654	+3.3013	−205	−48 35 31.67	−19.791	− 20
477	[γ Virgin. med.]	3.65 3.68	F 0 F 0	12 38 15.845	+3.0396	−375	− 1 4 56.16	−19.760	+ 5
478	76 Ursae maj.	5.92	A 0	12 38 38.773	+2.6268	− 45	+63 4 50.40	−19.777	− 17
479	[Hydr. 330 G.]	5.73	K 2	12 40 25.949	+3.1948	− 26	−27 57 23.99	−19.783	− 50

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Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ′ ″	″	
480	[β Muscae]	3.26	B 3	12 42 9.076	+3.6647	− 53	−67 44 30.25	−19.737	− 31
481	β Crucis	1.50	B 1	12 43 47.486	+3.4948	− 59	−59 19 22.25	−19.706	− 27
482	n Centauri	4.34	A 5	12 49 43.030	+3.3172	+ 45	−39 48 54.06	−19.612	− 37
483	ε Ursae maj.	1.68	A 0 p	12 51 5.258	+2.6432	+136	+56 19 23.36	−19.559	− 11
484	δ Virginis	3.66	M a	12 52 13.656	+3.0216	−315	+ 3 45 39.93	−19.589	− 63
486	8 Draconis	5.27	F 0	12 52 48.870	+2.3922	− 15	+65 48 5.86	−19.548	− 34
485	12 Can. ven. sq.	2.90	A 0 p	12 52 53.821	+2.8084	−199	+38 40 47.40	−19.462	+ 50
487	[δ Muscae]	3.63	K 2	12 57 37.817	+4.1020	+531	−71 11 16.84	−19.450	− 36
488	ε Virginis	2.95	K 0	12 58 50.501	+2.9865	−185	+11 19 7.91	−19.369	+ 18
489	[ξ² Centauri]	4.40	B 3	13 2 59.266	+3.4948	− 35	−49 32 52.81	−19.321	− 30
490	ϑ Virginis	4.44	A 0	13 6 28.721	+3.1052	− 24	− 5 10 54.51	−19.246	− 39
491	[17 Can. ven.]	6.04	F 0	13 6 58.809	+2.7569	− 59	+38 51 16.04	−19.162	+ 32
492	43 Comae	4.32	G 0	13 8 44.918	+2.8009	−602	+28 13 2.38	−18.271	+878
493	[η Muscae]	4.95	B 8	13 10 41.191	+4.0509	− 33	−67 32 24.82	−19.128	− 30
494	[20 Can. ven.]	4.66	F 0	13 14 32.484	+2.6920	−107	+40 55 29.07	−18.985	+ 8
495	γ Hydrae	3.33	G 5	13 15 16.487	+3.2594	+ 51	−22 49 7.23	−19.026	− 53
496	ι Centauri	2.91	A 2	13 16 49.339	+3.3672	−294	−36 21 34.09	−19.021	− 92
497	ζ Urs. maj. pr.	2.40	A 2 p	13 21 13.905	+2.4181	+143	+55 16 29.30	−18.823	− 25
498	α Virginis	1.21	B 2	13 21 39.615	+3.1592	− 28	−10 48 43.82	−18.818	− 33
499	Grb 2001	6.07	K 5	13 24 25.405	+1.5278	+ 35	+72 44 20.58	−18.714	− 15
500	69 H. Urs. maj.	5.41	A 0	13 25 59.738	+2.2037	−109	+60 17 29.15	−18.612	+ 37
501	ζ Virginis	3.44	A 2	13 31 16.644	+3.0562	−190	− 0 15 14.47	−18.441	+ 35
502	17 H. Can. ven.	4.96	F 0	13 31 48.408	+2.6792	+ 64	+37 31 30.34	−18.471	− 13
503	[Chamael. 49 G.]	6.44	A 0	13 33 25.000	+5.0934	− 49	−75 20 34.59	−18.416	− 14
505	[Grb 2029]	5.67	K 0	13 35 34.250	+1.4390	− 86	+71 34 58.60	−18.327	0
504	ε Centauri	2.56	B 1	13 35 37.707	+3.7912	− 37	−53 7 35.76	−18.358	− 34
506	[i Centauri]	4.36	F 5	13 41 52.388	+3.4048	−371	−32 42 20.41	−18.253	−156
507	τ Bootis	4.51	F 5	13 44 4.689	+2.8508	−340	+17 47 23.80	−17.984	+ 28
509	η Ursae maj.	1.91	B 3	13 44 54.201	+2.3660	−119	+49 38 49.38	−18.001	− 20
508	[μ Centauri]	3.32	B 2 p	13 45 34.237	+3.6076	− 28	−42 8 26.01	−17.974	− 19
510	89 Virginis	5.11	K 0	13 46 13.628	+3.2579	− 69	−17 48 3.91	−17.968	− 38
511	[i Draconis]	4.77	M a	13 49 28.526	+1.7524	0	+65 3 13.93	−17.803	− 2
512	ζ Centauri	3.06	B 2 p	13 51 20.879	+3.7341	− 70	−46 57 34.17	−17.785	− 61
513	η Bootis	2.80	G 0	13 51 29.677	+2.8569	− 41	+18 43 58.30	−18.082	−364
514	[Cent. 294 G.]	4.68	K 0	13 52 46.781	+4.3269	− 46	−63 21 32.76	−17.700	− 35
515	[47 Hydrae]	5.17	B 8	13 54 45.274	+3.3638	− 34	−24 38 45.84	−17.624	− 40
517	11 Bootis	6.12	A 3	13 58 8.262	+2.7213	− 57	+27 42 33.95	−17.432	+ 8
516	τ Virginis	4.34	A 2	13 58 14.108	+3.0527	+ 13	+ 1 52 4.52	−17.465	− 30
518	β Centauri	0.86	B 1	13 59 4.658	+4.2216	− 28	−60 3 3.29	−17.439	− 40
519	[π Hydrae]	3.48	K 0	14 2 33.005	+3.4134	+ 30	−26 21 37.98	−17.399	−153

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0″.001
		M		h m s	s		° ′ ″	″	
521	α Draconis	3.64	A 0 p	14 2 34.453	+1.6241	— 83	+64 41 44.35	—17.229	+ 16
520	ϑ Centauri	2.26	K 0	14 2 43.859	+3.5252	— 439	—36 2 28.70	—17.768	— 530
522	*d* Bootis	4.82	F 5	14 7 20.648	+2.7369	— 12	+25 24 29.73	—17.098	— 69
524	4 Ursae min.	5.00	K 0	14 9 4.715	—0.2554	— 112	+77 51 44.54	—16.916	+ 32
523	κ Virginis	4.31	K 0	14 9 19.109	+3.1989	+ 4	— 9 57 45.78	—16.803	+ 134
525	ι Virginis	4.16	F 5	14 12 29.875	+3.1443	— 13	— 5 40 54.00	—17.217	— 431
526	α Bootis	0.24	K 0	14 12 36.283	+2.7362	— 775	+19 31 49.64	—18.782	— 2001
528	[ι Bootis]	4.78	A 5	14 13 47.650	+2.1253	— 159	+51 40 32.29	—16.639	+ 86
527	λ Bootis	4.26	A 0	14 13 50.285	+2.2817	— 177	+46 23 42.84	—16.570	+ 152
529	[υ Centauri]	4.41	B 5	14 15 37.655	+4.1767	— 47	—56 4 45.16	—16.675	— 39
530	[Circini 10 G.]	5.71	A 2 p	14 19 31.088	+4.9500	— 41	—67 53 31.92	—16.479	— 36
531	ϑ Bootis	4.06	F 8	14 22 54.991	+2.0429	— 256	+52 9 35.13	—16.676	— 405
532	[52 Hydrae]	5.00	B 8	14 24 14.549	+3.5096	— 28	—29 11 29.61	—16.234	— 30
533	[φ Virginis]	4.97	K 0	14 24 44.889	+3.0905	— 90	— 1 55 42.78	—16.185	— 7
534	ρ Bootis	3.78	K 0	14 28 56.573	+2.5860	— 76	+30 39 52.84	—15.845	+ 113
535	γ Bootis	3.00	F 0	14 29 22.854	+2.4165	— 93	+38 36 1.83	—15.791	+ 144
536	[Grb 2125]	6.18	F 0	14 29 53.643	+1.6290	— 58	+60 31 13.24	—15.889	+ 18
537	η Centauri	2.65	B 3 p + A 2 p	14 31 14.596	+3.8034	— 36	—41 51 52.64	—15.872	— 36
538	*α Centauri	0.33 1.70	G 0 K 5	14 35 2.016	+4.0668	—4884	—60 33 36.06	—14.922	+ 709
540	[33 Bootis]	5.39	A 0	14 36 20.635	+2.2327	— 67	+44 41 34.59	—15.584	— 26
539	[α Circini]	3.41	F 0	14 37 3.982	+4.8290	— 320	—64 41 5.03	—15.757	— 239
541	[α Lupi]	2.89	B 2	14 37 27.769	+3.9831	— 20	—47 6 6.98	—15.532	— 36
543	ζ Bootis med.	4.83 4.43	A 2	14 37 56.906	+2.8646	+ 37	+14 0 52.91	—15.496	— 27
542	α Apodis	3.81	K 5	14 39 26.563	+7.3780	— 56	—78 45 45.64	—15.421	— 35
545	μ Virginis	3.95	F 5	14 39 31.583	+3.1604	+ 69	— 5 22 4.80	—15.708	— 326
544	[c¹ Centauri]	4.13	K 0	14 39 33.088	+3.6643	— 61	—34 53 11.18	—15.578	— 198
546	[*b* Lupi]	5.20	K 0	14 42 19.321	+4.1872	— 24	—52 6 4.59	—15.316	— 92
547	109 Virginis	3.76	A 0	14 42 51.585	+3.0324	— 75	+ 2 10 26.71	—15.232	— 39
548	α Librae	2.90	A 3	14 47 10.056	+3.3166	— 77	—15 45 52.12	—15.018	— 74
549	Grb 2164	5.67	K 2	14 49 44.204	+1.5213	— 170	+59 33 56.18	—14.664	+ 129
550	β Ursae min.	2.24	K 5	14 50 52.827	—0.1882	— 78	+74 25 45.50	—14.719	+ 7
551	Pi XIV, 221	5.77	A 0	14 53 3.427	+2.8314	— 10	+14 42 57.26	—14.614	— 18
552	β Lupi	2.81	B 2 p	14 54 7.967	+3.9221	— 51	—42 51 55.83	—14.592	— 60
553	[κ Centauri]	3.35	B 3	14 54 47.616	+3.8973	— 21	—41 50 11.98	—14.525	— 33
554	[2 H. Urs. min.]	4.86	M b	14 56 30.632	+0.9488	— 147	+66 11 56.52	—14.354	+ 34
555	β Bootis	3.63	G 5	14 59 25.333	+2.2600	— 36	+40 39 13.89	—14.252	— 43
556	γ Scorpii	3.41	M b	15 0 8.590	+3.5085	— 57	—25 1 11.86	—14.220	— 55
557	ψ Bootis	4.67	K 0	15 1 34.466	+2.5708	— 131	+27 12 28.33	—14.091	— 15
558	ζ Lupi	3.50	K 0	15 7 27.493	+4.3009	— 133	—51 50 44.27	—13.777	— 73
559	[ι Librae]	4.66	A 0 p	15 8 23.847	+3.4172	— 32	—19 32 21.99	—13.692	— 47

Nr. 538. Schwerpunkt des Systems. Abstand vom Schwerpunkt nach den Elementen von Lohse in den Publ. d. Astrophys. Obs. Potsdam No. 58

heller Stern: 1933.0 $\Delta\alpha = +0^s.275$ $\Delta\delta = -0''.29$
1934.0 $= +0.245$ $= -0.68$

Mittlere Sternörter 1933.0

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
562	[3 Serpentis]	5.44	K 0	15 11 51.429	+2.9816	− 12	+ 5 11 12.80	−13.428	− 7
561	[β Circini]	4.16	A 3	15 12 15.126	+4.6854	−130	−58 33 9.43	−13.545	− 149
560	γ Triang. austr.	3.06	A 0	15 12 37.614	+5.5815	−101	−68 26 2.18	−13.408	− 37
563	δ Bootis	3.54	K 0	15 12 48.100	+2.4193	+ 73	+33 33 49.63	−13.481	− 121
564	β Librae	2.74	B 8	15 13 23.914	+3.2271	− 64	− 9 8 12.97	−13.348	− 27
565	1 H. Urs. min.	5.23	G 0	15 13 51.728	+0.6847	+387	+67 36 3.03	−13.686	− 396
566	φ^1 Lupi	3.59	K 5	15 17 32.828	+3.8023	− 82	−36 1 11.06	−13.142	− 95
569	γ Ursae min.	3.14	A 2	15 20 49.211	−0.1038	− 32	+72 4 20.60	−12.813	+ 16
568	μ Bootis	4.47 6.66	F 0 K 0	15 21 57.533	+2.2664	−123	+37 36 40.34	−12.672	+ 80
570	[τ^1 Serpentis]	5.46	M a	15 22 40.879	+2.7821	− 11	+15 39 44.60	−12.727	− 24
571	ι Draconis	3.47	K 0	15 23 26.203	+1.3339	− 5	+59 12 0.81	−12.638	+ 14
567	[κ^1 Apodis]	5.65	B 5 p	15 24 10.177	+6.5064	+ 5	−73 9 34.36	−12.640	− 37
572	β Coron. bor.	3.72	F 0 p	15 25 3.991	+2.4740	−131	+29 20 8.18	−12.466	+ 76
573	ν^1 Bootis	5.15	K 5	15 28 31.337	+2.1551	+ 10	+41 3 37.96	−12.317	− 13
576	[ϑ Coron. bor.]	4.17	B 5	15 30 13.635	+2.4189	− 17	+31 35 2.82	−12.213	− 26
574	[ε Triang. austr.]	4.11	K 0	15 30 33.820	+5.4720	+ 29	−66 5 37.92	−12.245	− 82
575	γ Lupi	2.95	B 3	15 30 40.016	+3.9921	− 26	−40 56 35.16	−12.195	− 39
577	γ Librae	4.02	K 0	15 31 46.486	+3.3544	+ 43	−14 34 2.45	−12.075	+ 3
578	α Coron. bor.	2.31	A 0	15 31 51.035	+2.5401	+ 93	+26 56 20.69	−12.171	− 98
579	[3 H. Scorpii]	3.78	K 2	15 32 57.066	+3.6390	− 11	−27 54 52.68	−12.007	− 11
580	[φ Bootis]	5.41	G 5	15 35 25.217	+2.1548	+ 58	+40 34 14.21	−11.771	+ 52
581	[γ Coron. bor.]	3.93	A 0	15 39 55.733	+2.5198	− 74	+26 30 24.14	−11.468	+ 34
582	α Serpentis	2.75	K 0	15 40 57.969	+2.9544	+ 91	+ 6 38 6.75	−11.385	+ 42
583	β Serpentis	3.74	A 2	15 43 5.675	+2.7689	+ 51	+15 37 48.99	−11.329	− 54
587	[12 H. Dracon.]	5.13	A 2	15 45 38.413	+0.9120	+ 55	+62 48 22.21	−11.151	− 61
584	κ Serpentis	4.28	K 5	15 45 43.390	+2.7006	− 31	+18 20 50.11	−11.181	− 98
585	μ Serpentis	3.63	A 0	15 46 7.270	+3.1298	− 59	− 3 13 35.44	−11.086	− 32
590	ζ Ursae min.	4.34	A 2	15 46 24.591	−2.1703	+ 60	+78 0 5.29	−11.034	− 1
586	[χ Lupi]	4.11	B 9	15 46 41.677	+3.8083	− 15	−33 25 28.04	−11.043	− 30
588	ε Serpentis	3.75	A 2	15 47 28.461	+2.9898	+ 84	+ 4 40 41.34	−10.896	+ 59
589	β Triang. austr.	3.04	F 0	15 49 13.282	+5.2739	−278	−63 13 33.29	−11.234	− 407
591	[γ Serpentis]	3.86	F 5	15 53 21.422	+2.7707	+213	+15 52 44.39	−11.815	−1294
592	[π Scorpii]	3.00	B 2	15 54 47.603	+3.6264	− 15	−25 55 22.23	−10.451	− 37
593	ε Coron. bor.	4.22	K 0	15 54 48.754	+2.4833	− 61	+27 4 14.72	−10.481	− 68
595	[Grb 2296]	4.96	A 5	15 56 11.860	+1.4213	−187	+54 56 18.43	−10.198	+ 111
594	δ Scorpii	2.54	B 0	15 56 22.056	+3.5455	− 8	−22 25 57.41	−10.332	− 36
598	ϑ Draconis	4.11	F 8	16 0 37.868	+1.1231	−403	+58 44 37.43	− 9.635	+ 339
597	β Scorpii	2.90 5.06	B 1	16 1 32.229	+3.4864	− 7	−19 37 24.87	− 9.932	− 27
596	[δ Normae]	4.84	A 3 p	16 1 44.839	+4.2345	− 5	−44 59 36.15	− 9.883	+ 6
599	[ϑ Lupi]	4.33	B 3	16 2 11.125	+3.9349	− 29	−36 37 17.52	− 9.897	− 41

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
601	[φ Herculis]	4.26	B 9 p	16 6 39.466	+1.8900	− 23	+45 6 34.76	−9.483	+ 31
600	[ϰ Normae]	5.09	K 0	16 8 10.828	+4.7211	− 42	−54 27 34.21	−9.461	− 65
602	[δ Triang. austr.]	4.03	G 0	16 9 19.397	+5.4491	+ 8	−63 31 0.10	−9.334	− 26
603	δ Ophiuchi	3.03	M a	16 10 49.937	+3.1431	− 30	− 3 31 23.62	−9.340	−150
606	19 Ursae min.	5.51	B 8	16 12 42.526	−1.7270	− 4	+76 2 49.09	−9.032	+ 12
605	ε Ophiuchi	3.34	K 0	16 14 46.427	+3.1732	+ 53	− 4 31 50.37	−8.852	+ 31
604	γ^2 Normae	4.14	K 0	16 14 48.969	+4.4813	−190	−49 59 34.81	−8.941	− 61
607	[σ Scorpii]	3.08	B 1	16 17 6.701	+3.6443	− 11	−25 26 1.34	−8.732	− 33
608	τ Herculis	3.91	B 5	16 17 43.547	+1.8031	− 9	+46 28 19.35	−8.618	+ 32
609	γ Herculis	3.79	F 0	16 18 57.790	+2.6459	− 36	+19 18 33.36	−8.513	+ 40
612	[η Ursae min.]	5.04	F 0	16 19 26.328	−1.7687	−220	+75 54 37.81	−8.260	+256
610	[ζ Triang. austr.]	4.93	G 0	16 21 14.088	+6.4337	+366	−69 56 10.09	−8.289	+ 84
613	[ω Herculis]	4.53	A 0 p	16 22 19.352	+2.7682	+ 28	+14 11 10.14	−8.355	− 68
614	[Grb 2343]	5.66	A 2	16 22 57.313	+1.3118	+ 19	+55 21 24.55	−8.218	+ 18
615	η Draconis	2.89	G 5	16 23 4.758	+0.8103	− 28	+61 39 55.83	−8.165	+ 61
611	γ Apodis	3.90	K 0	16 23 6.853	+9.1612	−384	−78 45 1.18	−8.295	− 72
616	α Scorpii	1.22	M a + A 3	16 25 17.723	+3.6767	− 7	−26 17 5.86	−8.077	− 28
618	β Herculis	2.81	K 0	16 27 20.325	+2.5787	− 69	+21 38 3.73	−7.906	− 21
617	[λ Ophiuchi]	3.85	A 0	16 27 31.941	+3.0250	− 23	+ 2 7 44.47	−7.960	− 90
619	*A* Draconis	4.98	B 8 p	16 28 6.292	−0.1227	− 51	+68 54 47.30	−7.788	+ 35
620	[τ Scorpii]	2.91	B 0	16 31 42.434	+3.7325	− 11	−28 4 43.43	−7.566	− 33
621	σ Herculis	4.25	A 0	16 31 56.548	+1.9342	− 6	+42 34 27.33	−7.475	+ 38
622	ζ Ophiuchi	2.70	B 0	16 33 28.032	+3.3026	+ 9	−10 25 58.36	−7.367	+ 22
623	[Grb 2373]	6.39	G 5	16 33 29.772	−2.6002	−322	+77 34 51.44	−7.113	+274
624	[24 Scorpii]	5.04	K 0	16 37 41.698	+3.4683	− 18	−17 36 50.43	−7.047	− 3
626	η Herculis	3.61	K 0	16 40 35.907	+2.0568	+ 35	+39 2 55.53	−6.890	− 84
625	α Triang. austr.	1.88	K 2	16 41 33.075	+6.3396	+ 32	−68 54 27.02	−6.777	− 49
627	Grb 2377	4.88	F 0	16 44 1.448	+1.1375	+ 28	+56 54 3.42	−6.466	+ 58
628	ε Scorpii	2.36	K 0	16 45 49.126	+3.8830	−501	−34 10 23.75	−6.630	−255
629	49 Herculis	6.41	A 0 p	16 49 1.773	+2.7311	+ 12	+15 5 6.94	−6.115	− 6
630	ζ^2 Scorpii	3.75	K 5	16 49 51.710	+4.2169	−133	−42 14 54.31	−6.277	−238
631	ζ Arae	3.06	K 5	16 53 4.046	+4.9591	− 30	−55 53 11.48	−5.819	− 48
632	[ε^1 Arae]	4.15	K 2	16 54 14.098	+4.7755	− 19	−53 3 35.16	−5.681	− 8
633	ϰ Ophiuchi	3.42	K 0	16 54 29.739	+2.8391	−198	+ 9 28 40.17	−5.664	− 13
634	ε Herculis	3.92	A 0	16 57 43.530	+2.2953	− 35	+31 1 26.21	−5.356	+ 24
635	[60 Herculis]	4.91	A 3	17 2 16.209	+2.7816	+ 34	+12 49 53.31	−5.011	− 15
636	[Grb 2415]	6.27	A 2	17 5 35.553	+1.9567	− 29	+40 36 9.87	−4.742	− 28
637	η Ophiuchi	2.63	A 2	17 6 31.996	+3.4393	+ 23	−15 38 36.83	−4.544	+ 90
638	[η Scorpii]	3.44	F 2	17 7 21.009	+4.2945	+ 17	−43 9 10.13	−4.862	−298
639	ζ Draconis	3.22	B 5	17 8 35.329	+0.1716	− 29	+65 47 49.40	−4.437	+ 22

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
				h m s	s		° ' "	"	
640	α Herculis	M 3.48 5.39	M b	17 11 35.483	+2.7351	− 8	+14 27 55.18	−4.173	+ 29
641	δ Herculis	3.16	A 2	17 12 16.733	+2.4641	− 15	+24 55 1.32	−4.302	−159
643	π Herculis	3.36	K 5	17 12 42.769	+2.0894	− 21	+36 53 1.12	−4.105	+ 1
642	[ι Apodis]	5.60	B 8	17 14 36.674	+6.6821	− 14	−70 3 20.59	−3.970	− 27
644	ϑ Ophiuchi	3.37	B 3	17 17 53.532	+3.6831	− 7	−24 56 3.65	−3.687	− 25
645	β Arae	2.80	K 2	17 19 43.501	+4.9837	− 14	−55 28 7.98	−3.546	− 42
646	[*d* Ophiuchi]	4.37	F 5	17 23 4.383	+3.8292	+ 6	−29 48 29.33	−3.361	−145
647	[27 H. Ophiuchi]	4.61	F 0	17 23 4.524	+3.1832	− 58	− 5 1 44.16	−3.266	− 51
650	[*x* Herculis]	5.81	A 2	17 24 57.643	+1.5901	+ 2	+48 18 55.07	−3.071	− 19
648	δ Arae	3.79	B 8	17 25 2.729	+5.4129	− 70	−60 37 48.96	−3.146	−101
649	[υ Scorpii]	2.80	B 3	17 26 12.214	+4.0755	− 24	−37 14 39.33	−2.984	− 39
651	α Arae	2.97	B 3 p	17 26 39.502	+4.6351	− 38	−49 49 31.15	−2.999	− 94
653	β Draconis	2.99	G 0	17 28 55.077	+1.3553	− 15	+52 21 0.95	−2.700	+ 10
652	λ Scorpii	1.71	B 2	17 29 3.327	+4.0714	− 14	−37 3 24.30	−2.730	− 32
655	[ν¹ Draconis]	4.98	A 5	17 30 51.362	+1.1814	+176	+55 13 45.79	−2.491	+ 51
657	[ν² Draconis]	4.95	A 5	17 30 56.793	+1.1826	+181	+55 13 4.64	−2.482	+ 52
656	α Ophiuchi	2.14	A 5	17 31 49.396	+2.7843	+ 80	+12 36 26.60	−2.691	−233
659	[*f* Draconis]	5.21	K 0	17 32 13.699	−0.2430	− 33	+68 10 40.13	−2.289	+134
654	ϑ Scorpii	2.04	F 0	17 32 30.044	+4.3082	0	−42 57 26.22	−2.417	− 18
658	ξ Serpentis	3.64	A 5	17 33 44.905	+3.4341	− 34	−15 21 28.88	−2.355	− 65
664	ω Draconis	4.87	F 5	17 37 20.449	−0.3524	+ 10	+68 47 20.75	−1.655	+323
663	ι Herculis	3.79	B 3	17 37 34.364	+1.6934	− 5	+46 2 27.64	−1.962	− 4
660	[κ Scorpii]	2.51	B 2	17 37 50.990	+4.1484	− 15	−38 59 50.14	−1.961	− 26
662	[μ Arae]	5.26	G 5	17 38 49.279	+4.7610	− 29	−51 48 2.10	−2.058	−208
661	η Pavonis	3.58	K 0	17 39 9.096	+5.8853	− 22	−64 41 39.28	−1.877	− 56
665	β Ophiuchi	2.94	K 0	17 40 9.707	+2.9632	− 27	+ 4 35 37.60	−1.580	+153
666	[ι¹ Scorpii]	3.14	F 5 p	17 42 53.741	+4.1941	− 10	−40 6 10.13	−1.497	− 3
670	ψ Draconis	4.90 6.07	F 5	17 43 7.517	−1.0702	+ 32	+72 10 56.03	−1.741	−267
667	μ Herculis	3.48	G 5	17 43 50.099	+2.3474	−240	+27 45 31.30	−2.164	−751
668	[γ Ophiuchi]	3.74	A 0	17 44 31.940	+3.0078	− 16	+ 2 43 51.62	−1.429	− 77
669	[*G* Scorpii]	3.25	K 2	17 45 17.754	+4.0828	+ 41	−37 1 25.71	−1.259	+ 26
671	ξ Draconis	3.90	K 0	17 52 22.199	+1.0376	+120	+56 52 57.44	−0.591	+ 77
675	35 Draconis	5.04	F 5	17 52 26.723	−2.6884	+111	+76 58 22.43	−0.419	+241
672	ϑ Herculis	3.99	K 0	17 53 57.281	+2.0573	+ 4	+37 15 30.15	−0.524	+ 5
676	γ Draconis	2.42	K 5	17 55 2.983	+1.3928	− 9	+51 29 45.77	−0.455	− 22
674	[ξ Herculis]	3.82	K 0	17 55 9.649	+2.3313	+ 66	+29 15 13.83	−0.449	− 25
673	ν Ophiuchi	3.50	K 0	17 55 20.225	+3.3022	− 7	− 9 46 0.88	−0.525	−118
677	67 Ophiuchi	3.92	B 5 p	17 57 17.330	+3.0045	0	+ 2 55 59.95	−0.250	− 13
679	γ Sagittarii	3.07	K 0	18 1 30.160	+3.8530	− 47	−30 25 36.28	−0.063	−194
678	[Apodis 66 G.]	5.69	K 5	18 1 52.969	+8.3870	− 43	−75 53 46.95	−0.105	−270

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ′ ″	″	
680	72 Ophiuchi	3.73	A 3	18 4 10.358	+2.8439	− 42	+ 9 33 10.55	+0.443	+ 78
681	o Herculis	3.83	A 0	18 4 55.710	+2.3402	+ 2	+28 45 7.26	+0.431	0
682	μ Sagittarii	4.01	B 8 p	18 9 45.350	+3.5873	− 3	−21 4 41.12	+0.850	− 3
683	[η Sagittarii]	3.16	M b	18 13 5.550	+4.0587	− 117	−36 47 0.85	+0.981	−163
685	[36 Draconis]	5.03	F 5	18 13 30.658	+0.3452	+ 533	+64 22 27.70	+1.212	+ 31
684	[Grb 2533]	5.42	B 5	18 13 33.689	+1.8656	− 6	+42 8 7.69	+1.178	− 7
687	[δ Sagittarii]	2.84	K 0	18 16 42.272	+3.8407	+ 27	−29 51 30.02	+1.428	− 32
686	[ξ Pavonis]	4.25	K 2	18 17 3.086	+5.5274	− 26	−61 31 35.21	+1.507	+ 17
688	η Serpentis	3.42	K 0	18 17 50.539	+3.1037	− 372	− 2 55 3.76	+0.860	−699
689	ε Sagittarii	1.95	A 0	18 19 43.483	+3.9821	− 30	−34 25 4.99	+1.596	−127
690	109 Herculis	3.92	K 0	18 20 50.544	+2.5564	+ 140	+21 44 16.28	+1.563	−257
693	[φ Draconis]	4.24	A 0 p	18 21 43.211	−0.8595	− 17	+71 18 8.95	+1.930	+ 33
691	α Telescopii	3.76	B 3	18 22 0.339	+4.4485	− 21	−46 0 25.87	+1.874	− 48
695	χ Draconis	3.69	F 8	18 22 15.983	−1.0811	+1171	+72 42 15.19	+1.582	−362
694	*b* Draconis	4.85	A 2	18 22 55.945	+0.8764	− 45	+58 45 40.99	+2.061	+ 58
692	[λ Sagittarii]	2.94	K 0	18 23 50.125	+3.7021	− 37	−25 27 37.57	+1.893	−188
696	[2 H. Scuti]	4.73	A 3	18 25 22.705	+3.4189	− 3	−14 36 36.03	+2.217	+ 2
697	[ϑ Coron. austr.]	4.69	G 5	18 28 43.088	+4.2834	+ 15	−42 21 45.61	+2.481	− 24
700	[Grb 2655]	5.84	K 0	18 32 59.777	−2.8913	− 10	+77 29 45.81	+2.873	− 3
699	α Lyrae	0.14	A 0	18 34 40.184	+2.0314	+ 176	+38 43 12.96	+3.302	+281
698	ζ Pavonis	4.10	K 0	18 35 12.886	+7.0146	− 23	−71 29 19.61	+2.890	−178
701	[Grb 2640]	6.00	A 3	18 36 0.702	+0.1883	+ 18	+65 25 43.03	+3.221	+ 84
702	[5 H. Scuti]	5.09	G 5	18 39 52.323	+3.2672	+ 13	− 8 20 34.36	+3.479	+ 9
703	110 Herculis	4.26	F 5	18 42 46.658	+2.5813	− 12	+20 28 51.21	+3.379	−340
704	λ Pavonis	4.42	B 2	18 46 0.800	+5.5610	− 25	−62 16 0.60	+3.970	− 28
705	*β Lyrae	var.	B 8 p + B 2 p	18 47 36.360	+2.2149	+ 3	+33 17 1.94	+4.132	− 2
707	o Draconis	4.78	K 0	18 50 12.846	+0.8862	+ 105	+59 18 21.58	+4.381	+ 25
706	σ Sagittarii	2.14	B 3	18 51 6.678	+3.7198	+ 4	−26 22 54.20	+4.370	− 63
709	ϑ Serpent. pr.	4.50	A 5	18 52 53.318	+2.9823	+ 29	+ 4 6 53.81	+4.613	+ 28
708	λ Telescopii	5.03	B 9	18 53 6.345	+4.8009	+ 3	−53 1 41.03	+4.618	+ 14
711	**R* Lyrae	var.	M b	18 53 17.806	+1.8263	+ 28	+43 51 24.71	+4.696	+ 76
710	[ξ Sagittarii]	3.61	K 0	18 53 44.000	+3.5787	+ 18	−21 11 46.98	+4.640	− 16
714	[υ Draconis]	4.91	K 0	18 55 13.513	−0.7303	+ 103	+71 12 28.55	+4.824	+ 41
713	γ Lyrae	3.30	A 0 p	18 56 26.204	+2.2439	− 4	+32 35 47.58	+4.885	− 2
712	[ε Aquilae]	4.21	K 0	18 56 34.850	+2.7221	− 42	+14 58 33.37	+4.818	− 80
715	[ζ Sagittarii]	2.71	A 2	18 58 20.974	+3.8168	− 21	−29 58 39.14	+5.050	+ 2
716	ζ Aquilae	3.02	A 0	19 2 19.812	+2.7570	− 7	+13 45 45.01	+5.284	−101
717	λ Aquilae	3.55	B 9	19 2 41.606	+3.1836	− 16	− 4 59 3.99	+5.328	− 87
719	[ι Lyrae]	5.13	B 5	19 4 54.636	+2.1407	− 3	+35 59 38.74	+5.598	− 3
718	α Coron. austr.	4.12	A 2	19 4 54.917	+4.0817	+ 59	−38 0 38.62	+5.492	−109

Nr. 705. Größe: Max. 3.4, Min. 4.1 Nr. 711. Größe: Max. 4.0, Min. 4.7, Größe in Harvard 50 = 4.32

Mittlere Sternörter 1933.0

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0″.001
		M		h m s	s		° ′ ″	″	
720	π Sagittarii	3.02	F 2	19 5 46.802	+3.5678	− 5	−21 7 54.22	+ 5.639	− 35
721	[Pavonis 60 G.]	5.57	A 2	19 10 28.525	+6.0408	− 7	−66 46 45.33	+ 6.046	− 21
723	δ Draconis	3.24	K 0	19 12 32.685	+0.0172	+ 167	+67 32 37.02	+ 6.327	+ 88
722	[d Sagittarii]	5.03	K 0	19 13 42.950	+3.5101	− 12	−19 4 25.06	+ 6.328	− 9
724	ϑ Lyrae	4.46	K 0	19 14 2.510	+2.0818	− 7	+38 0 48.12	+ 6.362	− 1
725	ω Aquilae	5.14	A 5	19 14 40.283	+2.8157	− 3	+11 28 23.80	+ 6.429	+ 13
726	ϰ Cygni	3.98	K 0	19 15 33.315	+1.3871	+ 69	+53 14 38.82	+ 6.608	+ 119
729	τ Draconis	4.63	K 0	19 16 51.146	−1.1474	− 326	+73 13 53.88	+ 6.705	+ 109
727	[υ Sagittarii]	4.58	B 8 p + F 2 p	19 17 53.477	+3.4362	0	−16 4 55.96	+ 6.680	− 2
728	α Sagittarii	4.11	B 8	19 19 14.800	+4.1578	+ 18	−40 44 37.29	+ 6.675	− 118
730	δ Aquilae	3.44	F 0	19 22 7.216	+3.0246	+ 167	+ 2 58 47.34	+ 7.111	+ 81
731	[Sagittar. 186 G.]	5.68	B 9	19 22 42.535	+3.7919	+ 7	−29 52 38.33	+ 7.031	− 47
734	[Grb 2900]	6.00	A 2	19 25 47.002	−3.6086	+ 97	+79 28 12.25	+ 7.293	− 35
733	ι Cygni	3.94	A 2	19 28 1.037	+1.5128	+ 22	+51 35 10.49	+ 7.635	+ 125
732	*β Cygni	3.24	K 0 + A 0	19 28 1.128	+2.4191	− 2	+27 49 4.06	+ 7.503	− 8
735	[ι Telescopii]	5.02	K 0	19 30 14.918	+4.4512	− 41	−48 14 43.49	+ 7.651	− 40
736	h Sagittarii	4.66	B 9	19 32 37.906	+3.6513	+ 46	−25 1 58.96	+ 7.861	− 22
737	[ϰ Aquilae]	5.04	B 0	19 33 17.280	+3.2278	+ 3	− 7 10 40.05	+ 7.936	0
738	ϑ Cygni	4.64	F 5	19 34 38.666	+1.6080	− 29	+50 3 54.16	+ 8.291	+ 247
740	[15 Cygni]	5.02	K 0	19 41 51.587	+2.1633	+ 59	+37 11 29.59	+ 8.654	+ 36
739	[ν Telescopii]	5.52	A 5	19 42 33.358	+4.9034	+ 86	−56 31 31.79	+ 8.537	− 137
742	δ Cygni	2.97	A 0	19 42 52.875	+1.8756	+ 51	+44 57 58.59	+ 8.738	+ 40
741	γ Aquilae	2.80	K 2	19 43 4.453	+2.8519	+ 9	+10 26 55.55	+ 8.714	0
743	δ Sagittae	3.78	M a + A 0	19 44 24.002	+2.6749	+ 4	+18 22 4.19	+ 8.831	+ 13
744	[51 Aquilae]	5.55	F 0	19 47 5.696	+3.3013	− 21	−10 56 5.17	+ 9.071	+ 41
745	α Aquilae	0.89	A 5	19 47 30.847	+2.9267	+ 360	+ 8 41 24.40	+ 9.445	+ 383
747	ε Draconis	3.99	K 0	19 48 24.568	−0.1970	+ 156	+70 5 50.08	+ 9.162	+ 30
746	*[η Aquilae]	var.	G 0 p	19 49 3.629	+3.0563	+ 6	+ 0 49 56.44	+ 9.174	− 9
749	β Aquilae	3.90	K 0	19 52 1.320	+2.9465	+ 25	+ 6 14 17.42	+ 8.932	− 480
748	ε Pavonis	4.10	A 0	19 52 52.401	+6.9608	+ 148	−73 5 23.76	+ 9.346	− 132
750	ψ Cygni	4.80	A 3	19 53 53.882	+1.5511	− 43	+52 15 37.29	+ 9.525	− 31
751	ϑ¹ Sagittarii	4.39	B 3	19 55 22.681	+3.9054	− 12	−35 27 32.79	+ 9.634	− 36
752	γ Sagittae	3.71	K 5	19 55 46.617	+2.6675	+ 43	+19 18 32.48	+ 9.725	+ 24
753	[c Sagittarii]	4.60	M b	19 58 32.458	+3.6900	+ 21	−27 53 51.29	+ 9.929	+ 18
754	δ Pavonis	3.64	G 5	20 2 10.245	+5.8979	+1964	−66 21 18.95	+ 9.026	−1160
755	[ξ Telescopii]	4.86	M a	20 2 15.515	+4.5996	− 44	−53 4 28.03	+10.191	− 2
756	ϑ Aquilae	3.37	A 0	20 7 50.907	+3.0953	+ 22	− 1 1 17.30	+10.616	+ 6
759	ϰ Cephei	4.40	B 9	20 11 10.722	−1.9971	+ 12	+77 30 37.71	+10.883	+ 27
757	o¹ Cygni sq.	3.95	K 0 + B 8	20 11 31.308	+1.8892	+ 4	+46 32 14.21	+10.883	+ 1
758	[33 Cygni]	4.32	A 3	20 11 50.486	+1.3952	+ 74	+56 21 43.93	+10.990	+ 85

Nr. 732. Größe und Spektrum beziehen sich auf die hellere Komponente. Die entsprechenden Werte für die schwächere Komponente sind 5.36 und B 9. Nr. 746. Größe: Max. 3.7, Min. 4.5

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ′ ″	″	
760	24 Vulpeculae	5.45	K 0	20 13 55.054	+2.5671	+ 12	+24 27 49.01	+11.038	− 19
761	α² Capricorni	3.77	G 5	20 14 20.328	+3.3290	+ 40	−12 45 13.42	+11.099	+ 11
762	[β Capricorni]	3.25	G 0 + A 0	20 17 14.909	+3.3708	+ 23	−14 59 39.27	+11.305	+ 6
763	[κ¹ Sagittarii]	5.64	A 0	20 17 54.946	+4.0777	+ 37	−42 15 44.37	+11.251	− 96
765	γ Cygni	2.32	F 8 p	20 19 49.385	+2.1530	+ 4	+40 2 28.84	+11.484	0
764	α Pavonis	2.12	B 3	20 20 21.553	+4.7546	+ 11	−56 57 4.98	+11.437	− 85
766	[ρ Capricorni]	4.96	F 0	20 25 2.463	+3.4224	− 14	−18 2 11.00	+11.839	− 16
767	ϑ Cephei	4.28	A 5	20 28 27.645	+1.0086	+ 63	+62 46 6.47	+12.081	− 14
768	ε Delphini	3.98	B 5	20 30 0.721	+2.8660	+ 5	+11 4 27.75	+12.178	− 25
770	73 Draconis	5.18	A 2 p	20 32 24.820	−0.7758	+ 16	+74 43 31.16	+12.357	− 12
769	α Indi	3.21	K 0	20 32 51.657	+4.2231	+ 33	−47 31 35.99	+12.460	+ 60
771	β Delphini	3.72	F 5	20 34 24.421	+2.8130	+ 74	+14 21 39.42	+12.469	− 36
772	[κ Delphini]	5.23	G 5	20 35 52.513	+2.9137	+ 212	+ 9 50 56.70	+12.624	+ 18
773	υ Capricorni	5.33	Ma	20 36 14.287	+3.4159	− 17	−18 22 32.85	+12.614	− 16
774	α Delphini	3.86	B 8	20 36 31.559	+2.7865	+ 45	+15 40 28.39	+12.644	− 6
775	β Pavonis	3.60	A 5	20 38 56.633	+5.4231	− 71	−66 26 45.18	+12.815	+ 1
776	[η Indi]	4.70	F 0	20 39 7.675	+4.4107	+ 157	−52 9 43.18	+12.753	− 73
777	α Cygni	1.33	A 2 p	20 39 8.835	+2.0451	+ 4	+45 2 24.29	+12.826	− 1
778	[δ Delphini]	4.53	A 5	20 40 19.853	+2.8008	− 14	+14 49 59.10	+12.859	− 48
779	[ψ Capricorni]	4.26	F 8	20 42 7.912	+3.5533	− 44	−25 30 46.77	+12.869	− 157
780	ε Cygni	2.64	K 0	20 43 29.983	+2.4276	+ 290	+33 43 6.19	+13.445	+ 328
782	[6 H. Cephei]	4.63	G 0	20 43 41.379	+1.4892	− 86	+57 20 19.35	+12.895	− 234
783	η Cephei	3.59	K 0	20 43 55.798	+1.2220	+ 130	+61 34 41.02	+13.964	+ 819
781	ε Aquarii	3.83	A 0	20 44 3.027	+3.2478	+ 17	− 9 44 31.67	+13.125	− 28
784	λ Cygni	4.47	B 5	20 44 47.869	+2.3364	+ 5	+36 14 37.42	+13.202	0
785	β Indi	3.72	K 0	20 49 35.148	+4.6965	0	−58 42 30.38	+13.488	− 27
786	32 Vulpeculae	5.24	K 5	20 51 42.229	+2.5567	− 4	+27 48 6.81	+13.652	+ 1
788	ν Cygni	4.04	A 0	20 54 40.462	+2.2363	+ 9	+40 54 29.97	+13.823	− 17
787	[α Octantis]	5.24	F 2	20 56 39.896	+7.3186	− 12	−77 16 52.87	+13.611	− 355
789	[11 Aquarii]	6.26	G 0	20 57 2.205	+3.1588	+ 23	− 4 59 24.53	+13.856	− 133
790	ζ Microscopii	5.35	F 0	20 58 41.380	+3.8360	− 36	−38 53 40.15	+13.970	− 122
792	[ξ Cygni]	3.92	K 5	21 2 29.591	+2.1823	+ 12	+43 39 34.89	+14.324	− 3
791	[A Capricorni]	4.60	Ma	21 3 12.706	+3.5098	− 30	−25 16 29.62	+14.324	− 47
793	61 Cygni pr.	5.57	K 5	21 3 53.502	+2.6869	+3505	+38 25 8.60	+17.669	+3257
794	ν Aquarii	4.52	K 0	21 5 56.800	+3.2688	+ 62	−11 38 38.40	+14.527	− 9
795	Br 2777	5.90	B 9	21 6 52.423	−1.1766	+ 74	+77 51 18.42	+14.628	+ 36
797	ζ Cygni	3.40	K 0	21 10 5.014	+2.5528	− 1	+29 57 4.35	+14.724	− 59
798	[Grb 3415]	5.65	B 2	21 10 5.937	+1.5275	− 6	+59 42 37.80	+14.782	− 2
796	[Indi 23 G.]	5.84	A 5	21 10 59.153	+4.2872	− 19	−53 32 31.47	+14.790	− 46
799	[τ Cygni]	3.82	F 0	21 12 6.923	+2.3945	+ 137	+37 45 31.14	+15.338	+ 436

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
800	α Equulei	4.14	F 8 + A 3	21 12 28.510	+2.9991	+ 38	+ 4 58 11.39	+14.836	− 87
801	[4 Pisc. austr.]	4.79	A 0	21 13 52.781	+3.6398	+ 35	−32 27 13.15	+14.979	− 26
802	[ϑ¹ Microscop.]	4.92	A 2 p	21 16 28.973	+3.8427	+ 70	−41 5 37.23	+15.169	+ 14
803	α Cephei	2.60	A 5	21 16 58.895	+1.4325	+ 212	+62 18 4.39	+15.233	+ 50
804	1 Pegasi	4.24	K 0	21 18 59.236	+2.7743	+ 74	+19 31 0.82	+15.359	+ 61
805	γ Pavonis	4.30	F 8	21 20 55.578	+4.9763	+ 128	−65 40 15.28	+16.195	+ 788
806	ζ Capricorni	3.86	G 5 p	21 22 50.723	+3.4268	− 1	−22 42 9.44	+15.536	+ 23
807	[g Cygni]	5.34	K 0	21 26 58.537	+2.2137	+ 48	+46 14 39.90	+15.843	+ 103
809	β Cephei	3.32	B 1	21 27 48.209	+0.7790	+ 20	+70 15 58.82	+15.791	+ 7
808	β Aquarii	3.07	G 0	21 28 1.985	+3.1586	+ 11	− 5 52 0.65	+15.792	− 5
810	ν Octantis	3.74	K 0	21 34 5.751	+6.7266	+ 134	−77 41 21.88	+15.862	− 256
811	74 Cygni	5.09	A 5	21 34 15.700	+2.4040	− 3	+40 6 42.45	+16.138	+ 12
812	[γ Capricorni]	3.80	F 0 p	21 36 22.900	+3.3251	+ 131	−16 57 56.88	+16.220	− 16
813	[13 H. Cephei]	5.64	O e 5	21 36 52.890	+1.8621	+ 7	+57 11 7.99	+16.263	+ 2
815	ε Pegasi	2.54	K 0	21 40 53.705	+2.9463	+ 18	+ 9 34 0.98	+16.463	0
817	[11 Cephei]	4.85	K 0	21 40 56.819	+0.8832	+ 234	+71 0 9.56	+16.564	+ 98
814	[ι Pisc.austr.]	4.35	A 0	21 40 57.627	+3.5758	+ 18	−33 19 56.58	+16.378	− 89
816	[κ Pegasi]	4.27	F 5	21 41 36.587	+2.7162	+ 25	+25 20 10.57	+16.509	+ 10
818	[λ Capricorni]	5.43	A 0	21 42 55.848	+3.2304	+ 20	−11 40 32.76	+16.561	− 4
819	δ Capricorni	2.98	A 5	21 43 20.712	+3.3121	+ 178	−16 25 55.98	+16.292	− 293
821	π² Cygni	4.26	B 3	21 44 18.972	+2.2160	+ 8	+48 59 55.86	+16.629	− 4
820	[ο Indi]	5.50	K 2	21 45 8.846	+5.0957	− 86	−69 56 33.57	+16.652	− 21
822	γ Gruis	3.16	B 8	21 49 52.631	+3.6356	+ 77	−37 40 51.30	+16.881	− 18
823	16 Pegasi	5.05	B 3	21 50 0.733	+2.7293	+ 4	+25 36 33.05	+16.907	+ 1
824	[δ Indi]	4.56	F 0	21 53 22.183	+4.0906	+ 43	−55 18 44.73	+17.032	− 29
826	[20 Pegasi]	5.66	F 2	21 57 49.459	+2.9222	+ 36	+12 47 53.47	+17.209	− 54
825	[ε Indi]	4.74	K 5	21 58 14.950	+4.5988	+4809	−57 3 45.16	+14.706	−2575
827	α Aquarii	3.19	G 0	22 2 20.596	+3.0813	+ 10	− 0 38 45.93	+17.453	− 7
828	ι Aquarii	4.35	B 8	22 2 49.249	+3.2407	+ 24	−14 11 43.64	+17.429	− 51
830	20 Cephei	5.39	K 5	22 2 58.241	+1.8228	+ 22	+62 27 29.98	+17.547	+ 60
831	[ι Pegasi]	3.96	F 5	22 3 53.417	+2.7922	+ 219	+25 1 1.66	+17.548	+ 22
829	α Gruis	2.16	B 5	22 4 1.143	+3.7864	+ 119	−47 17 11.79	+17.360	− 171
832	[μ Pisc. austr.]	4.62	A 2	22 4 28.668	+3.5013	+ 41	−33 18 58.86	+17.510	− 41
833	[27 Pegasi]	5.65	K 0	22 6 15.406	+2.6579	− 42	+32 50 39.82	+17.561	− 65
834	ϑ Pegasi	3.70	A 2	22 6 49.209	+3.0262	+ 184	+ 5 52 3.06	+17.680	+ 31
835	π Pegasi	4.38	F 5	22 7 0.576	+2.6637	− 9	+32 50 55.75	+17.638	− 19
837	24 Cephei	4.99	G 5	22 8 31.401	+1.1546	+ 54	+72 0 39.32	+17.727	+ 8
836	ζ Cephei	3.62	K 0	22 8 31.600	+2.0797	+ 14	+57 52 13.70	+17.725	+ 6
838	[λ Pisc.austr.]	5.40	B 9	22 10 31.165	+3.4026	+ 16	−28 5 59.28	+17.799	− 1
839	[ε Octantis]	5.11	M b	22 12 36.879	+6.8021	+ 137	−80 46 28.40	+17.844	− 40

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ' "	"	
840	ϑ Aquarii	4.32	K 0	22 13 17.981	+3.1662	+ 76	− 8 7 3.34	+17.892	− 19
841	α Tucanae	2.91	K 2	22 13 55.676	+4.1218	− 98	−60 35 40.20	+17.886	− 49
842	γ Aquarii	3.97	A 0	22 18 11.773	+3.0986	+ 83	− 1 43 32.44	+18.106	+ 7
843	[31 Pegasi]	4.93	B 3 p	22 18 13.140	+2.9522	− 1	+11 52 1.11	+18.108	+ 9
844	3 Lacertae	4.58	K 0	22 20 55.296	+2.3577	− 15	+51 53 34.03	+18.010	−191
845	[ν Gruis]	5.48	K 0	22 24 43.921	+3.5197	+ 24	−39 28 17.33	+18.175	−162
846	[δ¹ Gruis]	4.02	G 5	22 25 16.316	+3.5900	+ 17	−43 50 19.03	+18.348	− 8
847	*[δ Cephei]	var.	veränd.	22 26 40.751	+2.2254	+ 17	+58 4 18.43	+18.407	+ 2
848	7 Lacertae	3.85	A 0	22 28 31.646	+2.4702	+ 147	+49 56 15.04	+18.485	+ 17
849	[υ Aquarii]	5.29	F 5	22 31 1.927	+3.2831	+ 155	−21 3 7.36	+18.409	−144
850	η Aquarii	4.13	B 8	22 31 54.840	+3.0829	+ 59	− 0 27 48.42	+18.526	− 55
851	[31 Cephei]	5.22	F 0	22 34 6.811	+1.4815	+ 384	+73 17 42.28	+18.676	+ 23
852	10 Lacertae	4.91	Oe 5	22 36 15.103	+2.6908	+ 4	+38 42 3.75	+18.714	− 6
853	[30 Cephei]	5.21	A 2	22 36 16.213	+2.1264	+ 1	+63 14 8.89	+18.700	− 22
854	[ε Pisc.austr.]	4.22	B 8	22 36 57.191	+3.3196	+ 12	−27 23 36.93	+18.745	+ 2
855	ζ Pegasi	3.61	B 8	22 38 7.182	+2.9918	+ 53	+10 28 51.72	+18.766	− 13
856	β Gruis	2.24	M b	22 38 40.404	+3.5867	+ 117	−47 14 8.99	+18.770	− 25
857	η Pegasi	3.10	G 0	22 39 51.526	+2.8112	+ 12	+29 52 12.79	+18.798	− 33
858	[13 Lacertae]	5.24	K 0	22 41 5.962	+2.6738	− 6	+41 28 1.76	+18.873	+ 5
859	λ Pegasi	4.14	K 0	22 43 18.101	+2.8888	+ 41	+23 12 45.20	+18.922	− 10
860	ε Gruis	3.69	A 2	22 44 30.958	+3.6292	+ 96	−51 40 11.32	+18.893	− 73
861	[τ Aquarii]	4.21	K 5	22 46 2.781	+3.1770	− 12	−13 56 48.17	+18.977	− 33
862	[μ Pegasi]	3.67	K 0	22 46 46.035	+2.8948	+ 109	+24 14 50.42	+18.989	− 41
863	ι Cephei	3.68	K 0	22 47 17.357	+2.1318	− 114	+65 50 51.68	+18.921	−123
864	λ Aquarii	3.84	M a	22 49 7.211	+3.1301	+ 5	− 7 56 11.81	+19.131	+ 38
865	ρ Indi	6.14	G 0	22 50 1.397	+4.1929	− 101	−70 25 56.19	+19.179	+ 62
866	δ Aquarii	3.51	A 2	22 51 5.780	+3.1844	− 33	−16 10 39.23	+19.126	− 19
867	α Pisc. austr.	1.29	A 3	22 53 57.109	+3.3167	+ 247	−29 58 39.82	+19.059	−159
868	[ζ Gruis]	4.18	G 5	22 56 56.036	+3.5488	− 80	−53 6 50.17	+19.274	− 16
869	ο Androm.	3.63	B 5 + A 2 p	22 58 50.048	+2.7585	+ 25	+41 57 55.44	+19.322	− 13
870	β Pegasi	2.61	M a	23 0 31.402	+2.9073	+ 145	+27 43 8.26	+19.510	+138
871	α Pegasi	2.57	A 0	23 1 25.297	+2.9875	+ 41	+14 50 39.69	+19.352	− 41
872	ϑ Gruis	4.35	F 5	23 3 6.643	+3.3835	− 52	−43 52 58.48	+19.392	− 38
874	π Cephei	4.56	G 5	23 5 45.662	+1.9045	+ 29	+75 1 30.45	+19.460	− 25
873	c^2 Aquarii	3.80	K 0	23 5 52.593	+3.1996	+ 32	−21 32 11.17	+19.524	+ 36
875	Br 3077	5.65	K 2	23 10 2.926	+2.8848	+2533	+56 47 53.25	+19.866	+296
876	[Tucanae 25 G.]	5.69	G 0	23 12 56.746	+3.6164	+ 231	−62 22 1.53	+19.570	− 53
877	γ Tucanae	4.10	F 2	23 13 31.753	+3.5079	− 59	−58 36 12.18	+19.715	+ 82
878	[γ Piscium]	3.85	K 0	23 13 41.484	+3.1096	+ 503	+ 2 54 57.00	+19.654	+ 18
879	γ Sculptoris	4.51	K 0	23 15 12.609	+3.2418	+ 10	−32 53 50.46	+19.595	− 68

Nr. 847. Größe: Max. 3.7, Min. 4.6; Spektrum wechselt von F 5 bis G 0.

Mittlere Sternörter 1933.0

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.0001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0″.001
		M		h m s	s		° ′ ″	″	
880	τ Pegasi	4.65	A 5	23 17 19.074	+2.9681	+ 21	+23 22 23.60	+19.684	− 13
882	4 Cassiopeiae	5.20	K 5	23 21 51.155	+2.6598	+ 17	+61 54 53.04	+19.757	− 10
881	[υ Pegasi]	4.57	G 0	23 22 1.949	+2.9931	+138	+23 2 5.83	+19.805	+ 35
883	[ο Gruis]	5.54	F 0	23 22 51.933	+3.3596	− 4	−53 5 34.26	+19.900	+119
884	κ Piscium	4.94	A 2 p	23 23 29.855	+3.0753	+ 56	+ 0 53 18.82	+19.697	− 93
885	70 Pegasi	4.67	K 0	23 25 45.859	+3.0331	+ 38	+12 23 26.25	+19.849	+ 28
886	[β Sculptoris]	4.46	B 9	23 29 22.967	+3.2195	+ 65	−38 11 21.00	+19.880	+ 14
887	[72 Pegasi]	5.21	K 2	23 30 37.509	+2.9745	+ 40	+30 57 19.33	+19.868	− 12
888	[Aquarii 248 G.]	6.51	K 0	23 32 4.732	+3.0948	− 5	− 7 50 7.44	+19.919	+ 23
889	[Phoenicis 11 G.]	4.86	A 2	23 34 14.879	+3.2321	+ 47	−45 51 49.17	+19.880	− 37
890	[λ Androm.]	4.00	K 0	23 34 16.688	+2.9331	+156	+46 5 41.76	+19.495	−423
891	ι Androm.	4.28	B 8	23 34 50.661	+2.9396	+ 27	+42 53 48.86	+19.919	− 5
892	ι Piscium	4.28	F 8	23 36 30.178	+3.0851	+247	+ 5 15 46.38	+19.499	−440
893	γ Cephei	3.42	K 0	23 36 34.913	+2.4517	−184	+77 15 30.20	+20.096	+157
894	ω² Aquarii	4.62	A 0	23 39 14.952	+3.1116	+ 65	−14 54 55.81	+19.899	− 63
895	41 H. Cephei	5.02	A 0	23 44 41.624	+2.8606	+ 23	+67 26 4.13	+20.001	+ 1
896	Lac. δ Sculpt.	4.64	A 0	23 45 26.317	+3.1261	+ 71	−28 30 3.42	+19.899	−105
897	[Aquarii 268 G.]	6.08	K 0	23 46 47.299	+3.0956	+ 86	−10 20 53.41	+20.097	+ 86
898	φ Pegasi	5.23	M a	23 49 4.582	+3.0505	− 8	+18 44 52.94	+19.982	− 39
899	[ρ Cassiopeiae]	4.85	F 8 p	23 51 1.553	+2.9913	− 7	+57 7 35.85	+20.033	+ 4
900	[27 Piscium]	5.07	K 0	23 55 14.562	+3.0711	− 37	− 3 55 39.83	+19.971	− 68
901	[π Phoenicis]	5.14	K 0	23 55 27.744	+3.1112	+ 30	−53 7 13.42	+20.086	+ 46
902	ω Piscium	4.03	F 5	23 55 52.159	+3.0802	+100	+ 6 29 32.50	+19.931	−109
903	ε Tucanae	4.71	B 9	23 56 26.775	+3.1258	+ 64	−65 57 0.06	+20.009	− 33
904	[θ Octantis]	4.73	K 0	23 58 10.465	+3.0989	−218	−77 26 8.25	+19.873	−171

Von den Sternen, deren Namen eingeklammert sind, folgen keine Ephemeriden.

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001

Nördliche Polsterne

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ′ ″	″	
Na	43 H. Cephei	4.52	K 0	0 59 13.84	+ 7.912	+ 76	+85 53 55.56	+19.377	− 2
Nb	α Ursae min.	2.12	F 8	1 38 31.57	+33.434	+155	+88 56 37.41	+18.221	0
Nc	*Grb 750	6.70	F 8	4 14 46.80	+17.902	+ 17	+85 22 35.35	+ 8.915	+ 32
Nd	51 H. Cephei	5.26	M a	7 9 47.41	+28.686	− 51	+87 9 22.89	− 6.045	− 35
Ne	1 H. Dracon.	4.58	K 2	9 27 41.28	+ 8.664	− 6	+81 37 29.76	−15.798	− 20
Nf	30 H. Camel.	5.34	F 2	10 23 4.70	+ 7.430	− 46	+82 54 3.34	−18.247	+ 31
Ng	ε Ursae min.	4.40	G 5	16 52 45.95	− 6.198	+ 7	+82 9 1.46	− 5.790	+ 6
Nh	δ Ursae min.	4.44	A 0	17 53 49.43	−19.483	+ 15	+86 36 47.31	− 0.483	+ 57
Ni	λ Ursae min.	6.55	M b	18 43 0.99	−75.185	− 99	+89 2 15.77	+ 3.747	+ 6
Nk	76 Draconis	5.69	A 0	20 47 33.24	− 4.253	+ 16	+82 17 5.12	+13.410	+ 27

Nr. Nc. Größe aus Harvard 54 entnommen.

Südliche Polsterne

Nr.	Name	Gr.	Spektrum	AR. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0s.001	Dekl. 1933.0	Jährl. Veränderung	Jährl. Eigenbew. in 0".001
		M		h m s	s		° ′ ″	″	
Sa	Octantis 4 G.	5.63	K 0	1 41 4.13	− 3.574	+ 18	−85 6 30.97	+18.161	+ 34
Sb	ξ Mensae	5.85	K 0	5 6 25.76	− 6.890	− 4	−82 33 46.39	+ 4.657	+ 14
Sc	ζ Octantis	5.38	F 0	9 6 46.59	− 8.406	− 94	−85 23 50.94	−14.537	+ 49
Sd	ι Octantis	5.38	K 0	12 47 44.20	+ 6.128	+ 42	−84 45 36.05	−19.586	+ 25
Se	Octantis 20 G.	6.52	A 2	14 53 20.41	+27.662	−184	−87 52 48.05	−14.649	− 70
Sf	Octantis 26 G.	6.13	A 0	16 35 31.32	+22.093	+ 5	−86 14 57.47	− 7.224	− 2
Sg	χ Octantis	5.22	K 0	18 15 43.17	+35.622	− 85	−87 39 38.56	+ 1.244	−130
Sh	σ Octantis	5.48	F 0	19 51 52.74	+86.346	+108	−89 11 13.11	+ 9.402	+ 1
Si	β Octantis	4.34	F 0	22 39 19.48	+ 6.218	− 26	−81 44 1.70	+18.817	+ 3
Sk	τ Octantis	5.56	K 0	23 18 45.85	+ 9.465	+ 20	−87 51 2.91	+19.736	+ 15

Scheinbare Sternörter 1933

Tag	1) α Andromedae AR.		Dekl.		2) β Cassiopeiae AR.		Dekl.		3) ε Phoenicis AR.		Dekl.		7) γ Pegasi AR.		Dekl.	
1933	0h 4m		+28° 43′		0h 5m		+58° 46′		0h 6m		−46° 6′		0h 9m		+14° 48′	
Jan. 0	55.050	129	25.08	87	34.537	302	68.01	68	1.518	190	75.24	41	47.031	107	46.31	77
10	54.921	123	24.21	113	34.235	290	67.33	120	1.328	174	74.83	88	46.924	102	45.54	89
20	54.798	111	23.08	133	33.945	265	66.13	167	1.154	152	73.95	131	46.822	91	44.65	96
30	54.687	92	21.75	149	33.680	228	64.46	206	1.002	126	72.64	171	46.731	77	43.69	99
Feb. 9	54.595	68	20.26	156	33.452	179	62.40	237	0.876	93	70.93	209	46.654	55	42.70	97
19	54.527	36	18.70	158	33.273	119	60.03	257	0.783	56	68.84	240	46.599	30	41.73	88
März 1	54.491	0	17.12	151	33.154	50	57.46	266	0.727	14	66.44	267	46.569	2	40.85	76
11	54.491	42	15.61	136	33.104	26	54.80	264	0.713	33	63.77	289	46.571	40	40.09	58
21	54.533	87	14.25	115	33.130	105	52.16	251	0.746	81	60.88	305	46.611	78	39.51	34
31	54.620	133	13.10	86	33.235	184	49.65	227	0.827	133	57.83	315	46.689	121	39.17	7
Apr. 10	54.753	180	12.24	53	33.419	262	47.38	194	0.960	184	54.68	319	46.810	162	39.10	23
20	54.933	224	11.71	17	33.681	333	45.44	154	1.144	235	51.49	316	46.972	204	39.33	54
30	55.157	265	11.54	23	34.014	396	43.90	106	1.379	282	48.33	306	47.176	241	39.87	86
Mai 10	55.422	298	11.77	61	34.410	447	42.84	57	1.661	324	45.27	291	47.417	273	40.73	117
20	55.720	325	12.38	100	34.857	487	42.27	3	1.985	360	42.36	268	47.690	300	41.90	145
30	56.045	345	13.38	136	35.344	513	42.24	49	2.345	387	39.68	239	47.990	318	43.35	170
Juni 9	56.390	354	14.74	169	35.857	525	42.73	101	2.732	405	37.29	204	48.308	330	45.05	190
19	56.744	354	16.43	197	36.382	523	43.74	150	3.137	413	35.25	165	48.638	332	46.95	206
29	57.098	347	18.40	220	36.905	509	45.24	196	3.550	409	33.60	121	48.970	326	49.01	217
Juli 9	57.445	330	20.60	237	37.414	481	47.20	235	3.959	397	32.39	76	49.296	312	51.18	221
19	57.775	306	22.97	250	37.895	444	49.55	271	4.356	372	31.63	27	49.608	291	53.39	222
29	58.081	275	25.47	256	38.339	397	52.26	299	4.728	338	31.36	21	49.899	264	55.61	216
Aug. 8	58.356	241	28.03	257	38.736	343	55.25	321	5.066	296	31.57	68	50.163	232	57.77	206
18	58.597	201	30.60	252	39.079	284	58.46	336	5.362	248	32.25	110	50.395	196	59.83	193
28	58.798	161	33.12	243	39.363	221	61.82	345	5.610	193	33.35	150	50.591	158	61.76	175
Sept. 7	58.959	120	35.55	230	39.584	158	65.27	347	5.803	137	34.85	181	50.749	119	63.51	156
17	59.079	79	37.85	212	39.742	93	68.74	342	5.940	79	36.66	206	50.868	82	65.07	135
26	59.158	41	39.97	192	39.835	32	72.16	329	6.019	23	38.72	222	50.950	47	66.42	112
Okt. 6	59.199	5	41.89	169	39.867	28	75.45	311	6.042	30	40.94	229	50.997	14	67.54	90
16	59.204	25	43.58	143	39.839	84	78.56	285	6.012	76	43.23	225	51.011	15	68.44	67
26	59.179	54	45.01	115	39.755	135	81.41	254	5.936	118	45.48	211	50.996	40	69.11	44
Nov. 5	59.125	76	46.16	86	39.620	181	83.95	216	5.818	151	47.59	190	50.956	61	69.55	23
15	59.049	96	47.02	55	39.439	221	86.11	172	5.667	176	49.49	159	50.895	78	69.78	1
25	58.953	111	47.57	24	39.218	253	87.83	125	5.491	193	51.08	122	50.817	91	69.79	19
Dez. 5	58.842	122	47.81	9	38.965	280	89.08	72	5.298	202	52.30	80	50.726	100	69.60	37
15	58.720	128	47.72	40	38.685	296	89.80	19	5.096	204	53.10	36	50.626	107	69.23	55
25	58.592	132	47.32	70	38.389	302	89.99	36	4.892	199	53.46	12	50.519	108	68.68	71
35	58.460		46.62		38.087		89.63		4.693		53.34		50.411		67.97	
Mittl. Ort	55.194		14.04		35.410		48.87		0.856		62.26		46.971		39.78	
sec δ, tg δ	1.140		+0.548		1.929		+1.650		1.443		−1.040		1.034		+0.264	
a, *a′*	+3.1		+20.0		+3.1		+20.0		+3.0		+20.0		+3.1		+20.0	
b, *b′*	+0.04		− 0.02		+0.11		− 0.02		−0.07		− 0.03		+0.02		−0.04	

Tag	9) ι Ceti AR.		9) ι Ceti Dekl.		10) ζ Tucanae AR.		10) ζ Tucanae Dekl.		11) β Hydri AR.		11) β Hydri Dekl.		12) α Phoenicis AR.		12) α Phoenicis Dekl.	
1933	$0^h\ 16^m$		$-9°\ 11'$		$0^h\ 16^m$		$-65°\ 15'$		$0^h\ 22^m$		$-77°\ 37'$		$0^h\ 22^m$		$-42°\ 39'$	
Jan. 0	1.176	102	44.74	49	36.67	40	83.27	86	17.98	89	70.70	109	59.237	180	83.66	15
10	1.074	98	45.23	34	36.27	36	82.41	142	17.09	83	69.61	168	59.057	170	83.51	60
20	0.976	88	45.57	18	35.91	33	80.99	194	16.26	75	67.93	221	58.887	155	82.91	103
30	0.888	73	45.75	1	35.58	28	79.05	240	15.51	65	65.72	270	58.732	132	81.88	145
Feb. 9	0.815	55	45.74	21	35.30	23	76.65	281	14.86	54	63.02	309	58.600	105	80.43	183
19	0.760	30	45.53	42	35.07	16	73.84	315	14.32	40	59.93	343	58.495	72	78.60	216
März 1	0.730	2	45.11	65	34.91	8	70.69	341	13.92	27	56.50	366	58.423	34	76.44	245
11	0.728	32	44.46	88	34.83	2	67.28	360	13.65	11	52.84	383	58.389	9	73.99	271
21	0.760	69	43.58	112	34.81	7	63.68	371	13.54	4	49.01	389	58.398	56	71.28	289
31	0.829	109	42.46	135	34.88	15	59.97	374	13.58	20	45.12	390	58.454	105	68.39	304
Apr. 10	0.938	150	41.11	157	35.03	23	56.23	370	13.78	35	41.22	380	58.559	155	65.35	311
20	1.088	189	39.54	178	35.26	31	52.53	359	14.13	50	37.42	363	58.714	205	62.24	312
30	1.277	226	37.76	194	35.57	38	48.94	339	14.63	63	33.79	339	58.919	252	59.12	308
Mai 10	1.503	258	35.82	207	35.95	46	45.55	311	15.26	77	30.40	307	59.171	295	56.04	295
20	1.761	287	33.75	216	36.41	51	42.44	279	16.03	87	27.33	269	59.466	332	53.09	278
30	2.048	307	31.59	219	36.92	55	39.65	238	16.90	97	24.64	224	59.798	361	50.31	253
Juni 9	2.355	321	29.40	218	37.47	59	37.27	193	17.87	103	22.40	175	60.159	382	47.78	221
19	2.676	325	27.22	210	38.06	61	35.34	143	18.90	107	20.65	121	60.541	392	45.57	185
29	3.001	322	25.12	197	38.67	61	33.91	90	19.97	109	19.44	65	60.933	393	43.72	145
Juli 9	3.323	312	23.15	179	39.28	60	33.01	35	21.06	107	18.79	8	61.326	383	42.27	100
19	3.635	292	21.36	158	39.88	56	32.66	20	22.13	102	18.71	50	61.709	364	41.27	53
29	3.927	267	19.78	132	40.44	52	32.86	75	23.15	94	19.21	107	62.073	335	40.74	5
Aug. 8	4.194	236	18.46	105	40.96	46	33.61	126	24.09	83	20.28	157	62.408	298	40.69	42
18	4.430	202	17.41	75	41.42	39	34.87	174	24.92	71	21.85	205	62.706	255	41.11	86
28	4.632	163	16.66	45	41.81	30	36.61	213	25.63	54	23.90	243	62.961	205	41.97	127
Sept. 7	4.795	125	16.21	17	42.11	21	38.74	245	26.17	38	26.33	274	63.166	153	43.24	163
17	4.920	87	16.04	10	42.32	12	41.19	268	26.55	19	29.07	294	63.319	100	44.87	190
26*)	5.007	50	16.14	33	42.44	2	43.87	280	26.74	0	32.01	303	63.419	47	46.77	211
Okt. 6	5.057	16	16.47	53	42.46	7	46.67	280	26.74	18	35.04	299	63.466	2	48.88	222
16	5.073	14	17.00	68	42.39	16	49.47	269	26.56	36	38.03	283	63.464	47	51.10	223
26	5.059	39	17.68	79	42.23	23	52.16	247	26.20	53	40.86	256	63.417	88	53.33	214
Nov. 5	5.020	61	18.47	85	42.00	30	54.63	213	25.67	66	43.42	218	63.329	121	55.47	198
15	4.959	78	19.32	87	41.70	35	56.76	172	25.01	77	45.60	171	63.208	148	57.45	171
25	4.881	90	20.19	84	41.35	39	58.48	122	24.24	86	47.31	115	63.060	168	59.16	139
Dez. 5	4.791	100	21.03	79	40.96	41	59.70	68	23.38	91	48.46	56	62.892	180	60.55	101
15	4.691	104	21.82	70	40.55	42	60.38	10	22.47	93	49.02	7	62.712	186	61.56	59
25	4.587	105	22.52	58	40.13	41	60.48	49	21.54	91	48.95	69	62.526	187	62.15	14
35	4.482		23.10		39.72		59.99		20.63		48.26		62.339		62.29	
Mittl. Ort	0.850		43.03		35.44		67.14		15.63		53.63		58.501		71.98	
sec δ, tg δ	1.013		−0.162		2.390		−2.171		4.668		−4.560		1.360		−0.922	
a, a'	+3.1		+20.0		+2.9		+20.0		+2.5		+20.0		+2.9		+19.9	
b, b'	−0.01		− 0.07		−0.14		− 0.07		−0.30		− 0.10		−0.06		− 0.10	

*) Bei Stern 11) und 12) lies Sept. 27

Scheinbare Sternörter 1933

Tag	13) 12 Ceti AR.		13) 12 Ceti Dekl.		17) ζ Cassiopeiae AR.		17) ζ Cassiopeiae Dekl.	
1933	$0^h 26^m$		$-4° 19'$		$0^h 33^m$		$+53° 31'$	
Jan. 0	37.516	103	38.21	58	13.264	250	61.37	42
10	37.413	99	38.79	47	13.014	248	60.95	91
20	37.314	93	39.26	35	12.766	237	60.04	136
30	37.221	80	39.61	21	12.529	213	58.68	174
Feb. 9	37.141	62	39.82	4	12.316	177	56.94	206
19	37.079	40	39.86	15	12.139	132	54.88	228
März 1	37.039	11	39.71	35	12.007	76	52.60	240
11	37.028	22	39.36	58	11.931	14	50.20	242
21	37.050	59	38.78	82	11.917	56	47.78	233
31	37.109	98	37.96	107	11.973	126	45.45	214
Apr. 10	37.207	140	36.89	130	12.099	196	43.31	185
20	37.347	180	35.59	152	12.295	264	41.46	151
30	37.527	218	34.07	173	12.559	324	39.95	108
Mai 10	37.745	252	32.34	190	12.883	377	38.87	63
20	37.997	280	30.44	202	13.260	420	38.24	14
30	38.277	302	28.42	211	13.680	450	38.10	34
Juni 9	38.579	317	26.31	213	14.130	470	38.44	83
19	38.896	324	24.18	212	14.600	475	39.27	130
29	39.220	321	22.06	203	15.075	470	40.57	172
Juli 9	39.541	312	20.03	191	15.545	454	42.29	211
19	39.853	294	18.12	173	15.999	427	44.40	245
29	40.147	271	16.39	152	16.426	391	46.85	272
Aug. 8	40.418	242	14.87	127	16.817	349	49.57	295
18	40.660	208	13.60	101	17.166	300	52.52	310
28	40.868	172	12.59	73	17.466	248	55.62	320
Sept. 7	41.040	134	11.86	46	17.714	195	58.82	323
17	41.174	98	11.40	19	17.909	139	62.05	320
27	41.272	61	11.21	5	18.048	85	65.25	311
Okt. 6	28 41.333	28	11.26	25	30 18.133	33	68.36	295
16	41.361	1	11.51	44	18.166	17	71.31	273
26	41.360	27	11.95	56	18.149	63	74.04	247
Nov. 5	41.333	50	12.51	67	18.086	107	76.51	214
15	41.283	68	13.18	73	17.979	147	78.65	176
25	41.215	82	13.91	75	17.832	179	80.41	133
Dez. 5	41.133	93	14.66	73	17.653	210	81.74	87
15	41.040	100	15.39	70	17.443	231	82.61	38
25	40.940	104	16.09	64	17.212	245	82.99	13
35	40.836		16.73		16.967		82.86	
Mittl. Ort	37.171		38.56		13.624		42.28	
sec δ, tg δ	1.003		−0.076		1.682		+1.353	
a, *a'*	+3.1		+19.9		+3.3		+19.8	
b, *b'*	−0.01		− 0.12		+0.09		− 0.14	

Tag	18) π Andromedae AR.		18) π Andromedae Dekl.		20) δ Andromedae AR.		20) δ Andromedae Dekl.	
1933	$0^h 33^m$		$+33° 21'$		$0^h 35^m$		$+30° 29'$	
Jan. 0	17.808	144	16.30	65	44.439	137	53.54	65
10	17.664	144	15.65	94	44.302	136	52.89	92
20	17.520	138	14.71	122	44.166	131	51.97	115
30	17.382	123	13.49	142	44.035	117	50.82	135
Feb. 9	17.259	101	12.07	158	43.918	97	49.47	147
19	17.158	70	10.49	165	43.821	69	48.00	154
März 1	17.088	35	8.84	165	43.752	33	46.46	151
11	17.053	8	7.19	156	43.719	8	44.95	142
21	17.061	56	5.63	140	43.727	53	43.53	125
31	17.117	106	4.23	117	43.780	102	42.28	102
Apr. 10	17.223	157	3.06	88	43.882	151	41.26	72
20	17.380	205	2.18	53	44.033	198	40.54	40
30	17.585	251	1.65	15	44.231	244	40.14	2
Mai 10	17.836	291	1.50	24	44.475	282	40.12	35
20	18.127	324	1.74	63	44.757	315	40.47	72
30	18.451	348	2.37	102	45.072	340	41.19	109
Juni 9	18.799	363	3.39	138	45.412	355	42.28	143
19	19.162	370	4.77	169	45.767	361	43.71	173
29	19.532	366	6.46	198	46.128	359	45.44	198
Juli 9	19.898	353	8.44	221	46.487	348	47.42	219
19	20.251	334	10.65	239	46.835	328	49.61	234
29	20.585	307	13.04	251	47.163	303	51.95	244
Aug. 8	20.892	274	15.55	257	47.466	270	54.39	249
18	21.166	238	18.12	258	47.736	236	56.88	248
28	21.404	198	20.70	255	47.972	197	59.36	242
Sept. 7	21.602	157	23.25	246	48.169	157	61.78	232
17	21.759	116	25.71	233	48.326	117	64.10	218
27	21.875	76	28.04	217	48.443	80	66.28	201
Okt. 6	30 21.951	40	30.21	197	30 48.523	43	68.29	181
16	21.991	5	32.18	173	48.566	9	70.10	158
26	21.996	27	33.91	148	48.575	22	71.68	132
Nov. 5	21.969	56	35.39	120	48.553	49	73.00	106
15	21.913	80	36.59	88	48.504	73	74.06	76
25	21.833	101	37.47	56	48.431	94	74.82	46
Dez. 5	21.732	120	38.03	23	48.337	111	75.28	15
15	21.612	133	38.26	12	48.226	125	75.43	17
25	21.479	142	38.14	45	48.101	134	75.26	47
35	21.337		37.69		47.967		74.79	
Mittl. Ort	17.804		2.73		44.380		40.79	
sec δ, tg δ	1.197		+0.658		1.161		+0.589	
a, *a'*	+3.2		+19.8		+3.2		+19.8	
b, *b'*	+0.04		− 0.14		+0.04		− 0.16	

Tag	21) α Cassiopeiae AR.		21) α Cassiopeiae Dekl.		22) β Ceti AR.		22) β Ceti Dekl.		25) o Cassiopeiae AR.		25) o Cassiopeiae Dekl.		24) 21 Cassiopeiae AR.		24) 21 Cassiopeiae Dekl.	
1933	0h 36m		+56° 10′		0h 40m		−18° 20′		0h 40m		+47° 55′		0h 41m		+74° 37′	
Jan. 0	41.122	274	32.42	34	14.177	117	78.84	44	58.770	208	22.52	42	9.86	70	42.81	7
10	40.848	273	32.08	86	14.060	114	79.28	19	58.562	209	22.10	86	9.16	70	42.88	55
20	40.575	262	31.22	131	13.946	109	79.47	8	58.353	201	21.24	127	8.46	67	42.33	114
30	40.313	236	29.91	173	13.837	97	79.39	35	58.152	184	19.97	161	7.79	61	41.19	167
Feb. 9	40.077	200	28.18	207	13.740	80	79.04	61	57.968	155	18.36	190	7.18	52	39.52	214
19	39.877	151	26.11	232	13.660	57	78.43	88	57.813	116	16.46	209	6.66	42	37.38	251
März 1	39.726	91	23.79	246	13.603	29	77.55	115	57.697	70	14.37	219	6.24	28	34.87	276
11	39.635	24	21.33	249	13.574	4	76.40	140	57.627	15	12.18	219	5.96	13	32.11	291
21	39.611	50	18.84	243	13.578	42	75.00	165	57.612	45	9.99	210	5.83	2	29.20	293
31	39.661	125	16.41	225	13.620	83	73.35	187	57.657	108	7.89	191	5.85	17	26.27	283
Apr. 10	39.786	200	14.16	198	13.703	124	71.48	206	57.765	171	5.98	163	6.02	33	23.44	262
20	39.986	272	12.18	164	13.827	168	69.42	222	57.936	232	4.35	130	6.35	48	20.82	231
30	40.258	337	10.54	122	13.995	207	67.20	235	58.168	289	3.05	90	6.83	60	18.51	191
Mai 10	40.595	394	9.32	77	14.202	245	64.85	242	58.457	337	2.15	46	7.43	72	16.60	146
20	40.989	439	8.55	28	14.447	276	62.43	244	58.794	378	1.69	1	8.15	81	15.14	95
30	41.428	472	8.27	22	14.723	302	59.99	240	59.172	407	1.68	46	8.96	87	14.19	40
Juni 9	41.900	494	8.49	72	15.025	320	57.59	230	59.579	427	2.14	90	9.83	91	13.79	14
19	42.394	501	9.21	119	15.345	330	55.29	215	60.006	435	3.04	133	10.74	94	13.93	69
29	42.895	496	10.40	165	15.675	332	53.14	195	60.441	432	4.37	173	11.68	92	14.62	122
Juli 9	43.391	480	12.05	204	16.007	324	51.19	169	60.873	419	6.10	208	12.60	89	15.84	172
19	43.871	452	14.09	240	16.331	311	49.50	139	61.292	396	8.18	238	13.49	85	17.56	218
29	44.323	415	16.49	270	16.642	287	48.11	106	61.688	366	10.56	262	14.34	78	19.74	259
Aug. 8	44.738	372	19.19	295	16.929	260	47.05	72	62.054	328	13.18	281	15.12	69	22.33	295
18	45.110	321	22.14	312	17.189	227	46.33	35	62.382	286	15.99	294	15.81	60	25.28	324
28	45.431	266	25.26	324	17.416	189	45.98	1	62.668	239	18.93	301	16.41	50	28.52	346
Sept. 7	45.697	210	28.50	329	17.605	152	45.97	33	62.907	192	21.94	302	16.91	38	31.98	363
17	45.907	151	31.79	328	17.757	111	46.30	63	63.099	143	24.96	297	17.29	27	35.61	371
27	46.058	94	35.07	320	17.868	73	46.93	88	63.242	95	27.93	286	17.56	15	39.32	372
Okt. 6	46.152	38	38.27	307	17.941	37	47.81	108	63.337	49	30.79	271	17.71	3	43.04	366
16	46.190	15	41.34	285	17.978	4	48.89	122	63.386	4	33.50	250	17.74	9	46.70	350
26	46.175	67	44.19	260	17.982	26	50.11	130	63.390	37	36.00	224	17.65	21	50.20	329
Nov. 5	46.108	113	46.79	227	17.956	51	51.41	131	63.353	75	38.24	193	17.44	31	53.49	298
15	45.995	157	49.06	189	17.905	72	52.72	126	63.278	111	40.17	157	17.13	42	56.47	259
25	45.838	195	50.95	146	17.833	90	53.98	116	63.167	141	41.74	118	16.71	51	59.06	214
Dez. 5	45.643	227	52.41	99	17.743	103	55.14	100	63.026	167	42.92	76	16.20	59	61.20	162
15	45.416	252	53.40	48	17.640	112	56.14	82	62.859	189	43.68	30	15.61	65	62.82	104
25	45.164	268	53.88	3	17.528	117	56.96	59	62.670	202	43.98	15	14.96	69	63.86	44
35	44.896		53.85		17.411		57.55		62.468		43.83		14.27		64.30	
Mittl. Ort	41.514		12.61		13.622		74.83		58.924		4.54		11.22		19.72	
sec δ, tg δ	1.796		+1.492		1.054		−0.332		1.492		+1.108		3.771		+3.636	
a, a′	+3.4		+19.8		+3.0		+19.7		+3.3		+19.7		+3.9		+19.7	
b, b′	+0.10		− 0.16		−0.02		− 0.17		+0.07		− 0.18		+0.24		− 0.18	

Scheinbare Sternörter 1933

Tag	27) ζ Andromedae AR.		Dekl.		32) γ Cassiopeiae AR.		Dekl.		33) μ Andromedae AR.		Dekl.		35) α Sculptoris AR.		Dekl.	
1933	$0^h\ 43^m$		$+23°\ 54'$		$0^h\ 52^m$		$+60°\ 21'$		$0^h\ 53^m$		$+38°\ 8'$		$0^h\ 55^m$		$-29°\ 42'$	
Jan. 0	^{s}47.143	123	$''$21.58	64	^{s}38.60	32	$''$36.65	7	^{s}1.725	159	$''$26.42	44	^{s}23.437	143	$''$77.02	37
10	47.020	124	20.94	83	38.28	32	36.58	62	1.566	164	25.98	78	23.294	142	77.39	1
20	46.896	121	20.11	101	37.96	32	35.96	112	1.402	160	25.20	111	23.152	137	77.40	36
30	46.775	110	19.10	114	37.64	30	34.84	158	1.242	149	24.09	137	23.015	127	77.04	71
Feb. 9	46.665	92	17.96	121	37.34	25	33.26	197	1.093	128	22.72	158	22.888	109	76.33	107
19	46.573	68	16.75	122	37.09	20	31.29	227	0.965	100	21.14	173	22.779	86	75.26	141
März 1	46.505	36	15.53	118	36.89	14	29.02	248	0.865	62	19.41	178	22.693	56	73.85	171
11	46.469	2	14.35	106	36.75	6	26.54	257	0.803	17	17.63	175	22.637	21	72.14	199
21	46.471	44	13.29	89	36.69	2	23.97	256	0.786	32	15.88	163	22.616	18	70.15	224
31	46.515	89	12.40	65	36.71	10	21.41	243	0.818	86	14.25	145	22.634	62	67.91	246
Apr. 10	46.604	136	11.75	38	36.81	19	18.98	221	0.904	141	12.80	119	22.696	107	65.45	262
20	46.740	183	11.37	6	37.00	27	16.77	189	1.045	195	11.61	87	22.803	153	62.83	274
30	46.923	225	11.31	27	37.27	35	14.88	152	1.240	245	10.74	51	22.956	198	60.09	281
Mai 10	47.148	264	11.58	61	37.62	41	13.36	108	1.485	289	10.23	11	23.154	239	57.28	281
20	47.412	296	12.19	94	38.03	47	12.28	59	1.774	328	10.12	29	23.393	276	54.47	276
30	47.708	320	13.13	126	38.50	51	11.69	10	2.102	356	10.41	69	23.669	305	51.71	263
Juni 9	48.028	338	14.39	154	39.01	54	11.59	40	2.458	376	11.10	108	23.974	329	49.08	245
19	48.366	346	15.93	179	39.55	55	11.99	90	2.834	386	12.18	143	24.303	342	46.63	221
29	48.712	344	17.72	198	40.10	55	12.89	137	3.220	387	13.61	176	24.645	349	44.42	190
Juli 9	49.056	336	19.70	213	40.65	54	14.26	181	3.607	377	15.37	203	24.994	344	42.52	156
19	49.392	319	21.83	223	41.19	51	16.07	220	3.984	361	17.40	226	25.338	333	40.96	117
29	49.711	296	24.06	227	41.70	48	18.27	254	4.345	335	19.66	244	25.671	313	39.79	75
Aug. 8	50.007	266	26.33	227	42.18	43	20.81	283	4.680	304	22.10	256	25.984	285	39.04	32
18	50.273	234	28.60	220	42.61	38	23.64	305	4.984	269	24.66	262	26.269	252	38.72	10
28	50.507	197	30.80	212	42.99	32	26.69	322	5.253	229	27.28	264	26.521	213	38.82	52
Sept. 7	50.704	160	32.92	198	43.31	26	29.91	332	5.482	189	29.92	260	26.734	173	39.34	90
17	50.864	123	34.90	183	43.57	20	33.23	336	5.671	147	32.52	252	26.907	130	40.24	123
27	50.987	86	36.73	163	43.77	14	36.59	332	5.818	106	35.04	239	27.037	88	41.47	150
Okt. 6	[2] 51.073	52	38.36	143	[4] 43.91	7	39.91	323	[5] 5.924	66	37.43	222	[5] 27.125	46	42.97	171
16	51.125	19	39.79	121	43.98	1	43.14	306	5.990	29	39.65	202	27.171	9	44.68	182
26	51.144	10	41.00	97	43.99	5	46.20	283	6.019	7	41.67	177	27.180	27	46.50	186
Nov. 5	51.134	36	41.97	73	43.94	11	49.03	254	6.012	39	43.44	151	27.153	57	48.36	181
15	51.098	59	42.70	49	43.83	16	51.57	217	5.973	70	44.95	119	27.096	84	50.17	169
25	51.039	79	43.19	24	43.67	21	53.74	176	5.903	96	46.14	87	27.012	105	51.86	150
Dez. 5	50.960	97	43.43	2	43.46	25	55.50	129	5.807	120	47.01	51	26.907	122	53.36	124
15	50.863	110	43.41	26	43.21	29	56.79	77	5.687	138	47.52	15	26.785	135	54.60	95
25	50.753	120	43.15	51	42.92	30	57.56	25	5.549	154	47.67	22	26.650	142	55.55	60
35	50.633		42.64		42.62		57.81		5.395		47.45		26.508		56.15	
Mittl. Ort	46.953		10.73		38.90		15.50		1.621		10.79		22.667		69.94	
sec δ, tg δ	1.094		+0.443		2.022		+1.757		1.271		+0.785		1.152		−0.571	
a, *a'*	+3.2		+19.7		+3.6		+19.5		+3.3		+19.5		+2.9		+19.5	
b, *b'*	+0.03		−0.19		+0.11		−0.23		+0.05		−0.23		−0.04		−0.24	

Obere Kulmination Greenwich

Tag	36) ε Piscium AR.		36) ε Piscium Dekl.		38) β Phoenicis AR.		38) β Phoenicis Dekl.		42) β Andromedae AR.		42) β Andromedae Dekl.		45) υ Piscium AR.		45) υ Piscium Dekl.	
1933	$0^h\,59^m$		$+7°\,31'$		$1^h\,3^m$		$-47°\,4'$		$1^h\,5^m$		$+35°\,15'$		$1^h\,15^m$		$+26°\,54'$	
Jan. 0	28.247	105	53.08	62	6.797	220	50.18	17	58.679	147	72.05	38	47.078	126	57.32	42
10	28.142	110	52.46	65	6.577	218	50.35	33	58.532	155	71.67	69	46.952	134	56.90	65
20	28.032	109	51.81	65	6.359	210	50.02	83	58.377	155	70.98	99	46.818	137	56.25	86
30	27.923	102	51.16	61	6.149	194	49.19	129	58.222	147	69.99	123	46.681	131	55.39	103
Feb. 9	27.821	89	50.55	55	5.955	171	47.90	173	58.075	130	68.76	143	46.550	119	54.36	115
19	27.732	68	50.00	44	5.784	141	46.17	213	57.945	104	67.33	156	46.431	98	53.21	121
März 1	27.664	43	49.56	31	5.643	104	44.04	248	57.841	71	65.77	162	46.333	68	52.00	123
11	27.621	10	49.25	13	5.539	60	41.56	278	57.770	29	64.15	159	46.265	33	50.77	116
21	27.611	27	49.12	8	5.479	11	38.78	302	57.741	19	62.56	148	46.232	10	49.61	104
31	27.638	69	49.20	32	5.468	41	35.76	320	57.760	70	61.08	132	46.242	57	48.57	85
Apr. 10	27.707	111	49.52	57	5.509	97	32.56	332	57.830	123	59.76	107	46.299	106	47.72	62
20	27.818	154	50.09	83	5.606	153	29.24	337	57.953	176	58.69	77	46.405	155	47.10	34
30	27.972	196	50.92	108	5.759	208	25.87	334	58.129	226	57.92	44	46.560	201	46.76	3
Mai 10	28.168	234	52.00	133	5.967	259	22.53	324	58.355	271	57.48	6	46.761	245	46.73	30
20	28.402	267	53.33	155	6.226	305	19.29	308	58.626	310	57.42	31	47.006	283	47.03	62
30	28.669	292	54.88	174	6.531	344	16.21	284	58.936	340	57.73	68	47.289	312	47.65	95
Juni 9	28.961	312	56.62	188	6.875	375	13.37	254	59.276	362	58.41	105	47.601	335	48.60	124
19	29.273	322	58.50	198	7.250	397	10.83	216	59.638	375	59.46	138	47.936	349	49.84	152
29	29.595	325	60.48	202	7.647	407	8.67	174	60.013	377	60.84	169	48.285	354	51.36	174
Juli 9	29.920	321	62.50	202	8.054	407	6.93	128	60.390	372	62.53	194	48.639	350	53.10	192
19	30.241	307	64.52	196	8.461	396	5.65	77	60.762	357	64.47	215	48.989	338	55.02	206
29	30.548	288	66.48	186	8.857	376	4.88	25	61.119	336	66.62	230	49.327	319	57.08	215
Aug. 8	30.836	263	68.34	171	9.233	344	4.63	26	61.455	307	68.92	241	49.646	295	59.23	218
18	31.099	234	70.05	154	9.577	306	4.89	77	61.762	274	71.33	246	49.941	266	61.41	218
28	31.333	201	71.59	133	9.883	260	5.66	124	62.036	238	73.79	247	50.207	232	63.59	212
Sept. 7	31.534	166	72.92	110	10.143	209	6.90	166	62.274	200	76.26	242	50.439	198	65.71	202
17	31.700	132	74.02	88	10.352	155	8.56	201	62.474	160	78.68	234	50.637	161	67.73	190
27	31.832	98	74.90	65	10.507	99	10.57	229	62.634	120	81.02	222	50.798	125	69.63	175
Okt. 6*)	31.930	65	75.55	43	10.606	44	12.86	245	62.754	83	83.24	205	50.923	91	71.38	158
16	31.995	34	75.98	22	10.650	8	15.31	254	62.837	46	85.29	186	51.014	57	72.96	138
26	32.029	6	76.20	4	10.642	56	17.85	249	62.883	12	87.15	164	51.071	25	74.34	117
Nov. 5	32.035	18	76.24	12	10.586	100	20.34	236	62.895	20	88.79	138	51.096	5	75.51	94
15	32.017	41	76.12	27	10.486	138	22.70	213	62.875	51	90.17	111	51.091	32	76.45	72
25	31.976	61	75.85	38	10.348	168	24.83	180	62.824	78	91.28	81	51.059	58	77.17	47
Dez. 5	31.915	78	75.47	49	10.180	192	26.63	142	62.746	103	92.09	49	51.001	81	77.64	22
15	31.837	92	74.98	56	9.988	210	28.05	97	62.643	124	92.58	15	50.920	102	77.86	3
25	31.745	102	74.42	61	9.778	220	29.02	49	62.519	140	92.73	18	50.818	118	77.83	28
35	31.643		73.81		9.558		29.51		62.379		92.55		50.700		77.55	
Mittl. Ort	27.810		47.45		5.689		38.85		58.436		56.93		46.687		44.59	
sec δ, tg δ	1.009		+0.132		1.468		−1.075		1.225		+0.707		1.122		+0.508	
a, *a'*	+3.1		+19.4		+2.7		+19.3		+3.3		+19.2		+3.3		+19.0	
b, *b'*	+0.01		− 0.26		−0.07		− 0.27		+0.05		− 0.28		+0.03		− 0.32	

*) Bei Stern 38), 42) und 45) lies Okt. 7

Tag	47) ϑ Ceti AR.		47) ϑ Ceti Dekl.		48) δ Cassiopeiae AR.		48) δ Cassiopeiae Dekl.		50) η Piscium AR.		50) η Piscium Dekl.		51) 40 Cassiopeiae AR.		51) 40 Cassiopeiae Dekl.	
1933	$1^h 20^m$		$-8° 31'$		$1^h 21^m$		$+59° 53'$		$1^h 27^m$		$+15° 0'$		$1^h 33^m$		$+72° 41'$	
	s		″		s		″		s		″		s		″	
Jan. 0	41.117	109	42.32	67	25.025	301	37.62	25	54.210	108	12.30	51	7.34	58	82.10	71
10	41.008	116	42.99	51	24.724	317	37.87	27	54.102	118	11.79	62	6.76	60	82.81	12
20	40.892	118	43.50	33	24.407	320	37.60	79	53.984	122	11.17	69	6.16	62	82.93	48
30	40.774	113	43.83	13	24.087	307	36.81	126	53.862	120	10.48	74	5.54	59	82.45	106
Feb. 9	40.661	104	43.96	8	23.780	279	35.55	168	53.742	110	9.74	74	4.95	55	81.39	156
19	40.557	86	43.88	30	23.501	236	33.87	203	53.632	95	9.00	72	4.40	47	79.83	203
März 1	40.471	64	43.58	53	23.265	178	31.84	228	53.537	69	8.28	65	3.93	38	77.80	238
11	40.407	33	43.05	77	23.087	110	29.56	244	53.468	38	7.63	53	3.55	26	75.42	264
21	40.374	2	42.28	101	22.977	32	27.12	249	53.430	0	7.10	36	3.29	13	72.78	277
31	40.376	42	41.27	126	22.945	53	24.63	243	53.430	41	6.74	17	3.16	1	70.01	281
Apr. 10	40.418	84	40.01	148	22.998	138	22.20	227	53.471	87	6.57	7	3.17	15	67.20	272
20	40.502	128	38.53	170	23.136	222	19.93	202	53.558	133	6.64	33	3.32	29	64.48	253
30	40.630	170	36.83	188	23.358	302	17.91	170	53.691	177	6.97	59	3.61	42	61.95	225
Mai 10	40.800	210	34.95	204	23.660	374	16.21	131	53.868	219	7.56	86	4.03	55	59.70	188
20	41.010	245	32.91	214	24.034	436	14.90	87	54.087	256	8.42	112	4.58	64	57.82	146
30	41.255	275	30.77	221	24.470	485	14.03	41	54.343	285	9.54	136	5.22	73	56.36	98
Juni 9	41.530	298	28.56	222	24.955	521	13.62	7	54.628	310	10.90	157	5.95	80	55.38	48
19	41.828	313	26.34	217	25.476	545	13.69	56	54.938	324	12.47	172	6.75	84	54.90	3
29	42.141	321	24.17	207	26.021	553	14.25	102	55.262	331	14.19	185	7.59	86	54.93	55
Juli 9	42.462	320	22.10	191	26.574	548	15.27	145	55.593	331	16.04	193	8.45	86	55.48	105
19	42.782	311	20.19	171	27.122	533	16.72	186	55.924	322	17.97	194	9.31	84	56.53	153
29	43.093	296	18.48	146	27.655	505	18.58	222	56.246	306	19.91	193	10.15	80	58.06	196
Aug. 8	43.389	274	17.02	118	28.160	468	20.80	253	56.552	285	21.84	185	10.95	76	60.02	237
18	43.663	248	15.84	87	28.628	424	23.33	279	56.837	259	23.69	174	11.71	69	62.39	272
28	43.911	217	14.97	55	29.052	372	26.12	299	57.096	229	25.43	160	12.40	61	65.11	301
Sept. 7	44.128	184	14.42	24	29.424	317	29.11	312	57.325	197	27.03	143	13.01	53	68.12	324
17	44.312	149	14.18	6	29.741	258	32.23	320	57.522	164	28.46	125	13.54	43	71.36	341
27	44.461	115	14.24	35	29.999	197	35.43	322	57.686	130	29.71	104	13.97	34	74.77	351
Okt. 7	44.576	81	14.59	58	30.196	136	38.65	318	57.816	98	30.75	85	14.31	23	78.28	355
16	[12] 44.657	50	15.17	77	[12] 30.332	74	41.83	306	[13] 57.914	67	31.60	64	[15] 14.54	12	81.83	350
26	44.707	19	15.94	92	30.406	14	44.89	288	57.981	37	32.24	46	14.66	1	85.33	338
Nov. 5	44.726	8	16.86	101	30.420	47	47.77	265	58.018	9	32.70	27	14.67	10	88.71	318
15	44.718	33	17.87	105	30.373	104	50.42	233	58.027	17	32.97	10	14.57	20	91.89	290
25	44.685	55	18.92	104	30.269	158	52.75	197	58.010	41	33.07	5	14.37	30	94.79	254
Dez. 5	44.630	75	19.96	99	30.111	207	54.72	154	57.969	64	33.02	20	14.07	40	97.33	210
15	44.555	91	20.95	89	29.904	250	56.26	107	57.905	83	32.82	35	13.67	48	99.43	161
25	44.464	104	21.84	78	29.654	285	57.33	56	57.822	100	32.47	46	13.19	54	101.04	106
35	44.360		22.62		29.369		57.89		57.722		32.01		12.65		102.10	
Mittl. Ort	40.422		42.97		24.912		15.96		53.651		3.28		7.25		58.24	
sec δ, tg δ	1.011		−0.150		1.993		+1.724		1.035		+0.268		3.363		+3.211	
a, a'	+3.0		+18.8		+3.9		+18.8		+3.2		+18.6		+4.8		+18.4	
b, b'	−0.01		− 0.34		+0.11		− 0.35		+0.02		− 0.37		+0.20		− 0.40	

Tag	52) υ Persei AR.		Dekl.		54) α Eridani AR.		Dekl.		55) 43 Cassiopeiae AR.		Dekl.		57) φ Persei AR.		Dekl.	
1933	1h 33m		+48° 17′		1h 35m		−57° 33′		1h 37m		+67° 42′		1h 39m		+50° 21′	
Jan. 0	52.485	196	41.17	12	15.000	319	108.43	39	21.26	42	41.50	64	27.351	207	26.77	23
10	52.289	213	41.29	31	14.681	327	108.82	19	20.84	45	42.14	7	27.144	225	27.00	23
20	52.076	220	40.98	73	14.354	322	108.63	74	20.39	46	42.21	50	26.919	234	26.77	65
30	51.856	215	40.25	112	14.032	310	107.89	127	19.93	45	41.71	104	26.685	231	26.12	107
Feb. 9	51.641	200	39.13	145	13.722	285	106.62	178	19.48	42	40.67	153	26.454	215	25.05	142
19	51.441	172	37.68	173	13.437	251	104.84	224	19.06	36	39.14	196	26.239	188	23.63	171
März 1	51.269	134	35.95	191	13.186	209	102.60	264	18.70	29	37.18	229	26.051	149	21.92	194
11	51.135	84	34.04	202	12.977	158	99.96	297	18.41	20	34.89	253	25.902	97	19.98	206
21	51.051	27	32.02	204	12.819	99	96.99	325	18.21	10	32.36	265	25.805	39	17.92	210
31	51.024	35	29.98	196	12.720	35	93.74	346	18.11	1	29.71	267	25.766	27	15.82	204
Apr. 10	51.059	101	28.02	179	12.685	34	90.28	359	18.12	13	27.04	258	25.793	95	13.78	190
20	51.160	167	26.23	155	12.719	104	86.69	365	18.25	23	24.46	238	25.888	163	11.88	167
30	51.327	230	24.68	125	12.823	174	83.04	362	18.48	34	22.08	210	26.051	230	10.21	137
Mai 10	51.557	287	23.43	89	12.997	241	79.42	353	18.82	44	19.98	174	26.281	290	8.84	102
20	51.844	339	22.54	49	13.238	304	75.89	334	19.26	52	18.24	133	26.571	344	7.82	63
30	52.183	379	22.05	9	13.542	360	72.55	309	19.78	59	16.91	86	26.915	388	7.19	22
Juni 9	52.562	411	21.96	34	13.902	406	69.46	276	20.37	64	16.05	38	27.303	421	6.97	20
19	52.973	432	22.30	75	14.308	444	66.70	236	21.01	68	15.67	12	27.724	445	7.17	63
29	53.405	442	23.05	114	14.752	467	64.34	190	21.69	70	15.79	62	28.169	456	7.80	103
Juli 9	53.847	442	24.19	151	15.219	479	62.44	139	22.39	70	16.41	110	28.625	457	8.83	141
19	54.289	430	25.70	182	15.698	478	61.05	85	23.09	69	17.51	154	29.082	448	10.24	175
29	54.719	412	27.52	212	16.176	464	60.20	28	23.78	65	19.05	197	29.530	429	11.99	205
Aug. 8	55.131	384	29.64	234	16.640	437	59.92	29	24.43	62	21.02	234	29.959	402	14.04	230
18	55.515	351	31.98	253	17.077	399	60.21	85	25.05	57	23.36	266	30.361	369	16.34	251
28	55.866	312	34.51	265	17.476	349	61.06	139	25.62	50	26.02	294	30.730	330	18.85	266
Sept. 7	56.178	271	37.16	273	17.825	292	62.45	186	26.12	44	28.96	314	31.060	288	21.51	275
17	56.449	227	39.89	276	18.117	228	64.31	227	26.56	36	32.10	329	31.348	243	24.26	280
27	56.676	182	42.65	273	18.345	159	66.58	259	26.92	29	35.39	338	31.591	196	27.06	279
Okt. 7	56.858	136	45.38	266	18.504	89	69.17	280	27.21	21	38.77	339	31.787	149	29.85	274
16	(15) 56.994	90	48.04	253	(15) 18.593	19	71.97	292	(16) 27.42	12	42.16	334	(16) 31.936	101	32.59	262
26	57.084	45	50.57	235	18.612	49	74.89	290	27.54	4	45.50	322	32.037	54	35.21	247
Nov. 5	57.129	2	52.92	213	18.563	111	77.79	277	27.58	5	48.72	301	32.091	8	37.68	224
15	57.131	41	55.05	186	18.452	169	80.56	254	27.53	12	51.73	273	32.099	38	39.92	199
25	57.090	81	56.91	154	18.283	218	83.10	220	27.41	21	54.46	239	32.061	81	41.91	166
Dez. 5	57.009	120	58.45	118	18.065	260	85.30	178	27.20	28	56.85	197	31.980	122	43.57	131
15	56.889	153	59.63	79	17.805	291	87.08	128	26.92	34	58.82	149	31.858	160	44.88	91
25	56.736	182	60.42	37	17.514	314	88.36	75	26.58	40	60.31	97	31.698	190	45.79	49
35	56.554		60.79		17.200		89.11		26.18		61.28		31.508		46.28	
Mittl. Ort	52.100		21.94		13.316		96.44		21.00		18.31		26.920		6.98	
sec δ, tg δ	1.503		+1.122		1.865		−1.574		2.636		+2.439		1.567		+1.207	
a, a′	+3.7		+18.4		+2.2		+18.3		+4.4		+18.3		+3.8		+18.2	
b, b′	+0.07		−0.40		−0.10		−0.40		+0.15		−0.41		+0.07		−0.42	

Tag	59) τ Ceti ¹)				60) ο Piscium				61) Lac. ε Sculptoris				62) ζ Ceti			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	1ʰ 40ᵐ		−16° 16′		1ʰ 41ᵐ		+8° 49′		1ʰ 42ᵐ		−25° 22′		1ʰ 48ᵐ		−10° 39′	
Jan. 0	58.174	120	84.85	71	51.841	102	23.39	57	31.410	134	78.09	77	10.000	108	54.74	76
10	58.054	130	85.56	46	51.739	113	22.82	59	31.276	143	78.86	43	9.892	121	55.50	58
20	57.924	135	86.02	20	51.626	121	22.23	59	31.133	148	79.29	8	9.771	126	56.08	37
30	57.789	133	86.22	8	51.505	121	21.64	58	30.985	147	79.37	27	9.645	128	56.45	14
Feb. 9	57.656	124	86.14	37	51.384	115	21.06	52	30.838	137	79.10	63	9.517	122	56.59	9
19	57.532	109	85.77	65	51.269	100	20.54	45	30.701	122	78.47	97	9.395	108	56.50	34
März 1	57.423	87	85.12	92	51.169	78	20.09	33	30.579	99	77.50	130	9.287	88	56.16	59
11	57.336	59	84.20	121	51.091	50	19.76	19	30.480	69	76.20	160	9.199	60	55.57	83
21	57.277	22	82.99	146	51.041	13	19.57	1	30.411	32	74.60	189	9.139	26	54.74	109
31	57.255	17	81.53	171	51.028	27	19.56	19	30.379	8	72.71	215	9.113	13	53.65	134
Apr. 10	57.272	60	79.82	194	51.055	70	19.75	42	30.387	54	70.56	237	9.126	55	52.31	156
20	57.332	104	77.88	213	51.125	115	20.17	67	30.441	100	68.19	254	9.181	100	50.75	178
30	57.436	149	75.75	229	51.240	160	20.84	91	30.541	146	65.65	267	9.281	143	48.97	197
Mai 10	57.585	191	73.46	241	51.400	202	21.75	114	30.687	190	62.98	274	9.424	186	47.00	212
20	57.776	229	71.05	246	51.602	239	22.89	137	30.877	232	60.24	278	9.610	224	44.88	222
30	58.005	262	68.59	248	51.841	271	24.26	155	31.109	266	57.46	269	9.834	258	42.66	228
Juni 9	58.267	289	66.11	243	52.112	296	25.81	171	31.375	296	54.77	259	10.092	284	40.38	228
19	58.556	307	63.68	231	52.408	313	27.52	182	31.671	317	52.18	241	10.376	304	38.10	223
29	58.863	318	61.37	215	52.721	323	29.34	189	31.988	329	49.77	218	10.680	315	35.87	212
Juli 9	59.181	321	59.22	192	53.044	324	31.23	190	32.317	335	47.59	187	10.995	320	33.75	194
19	59.502	316	57.30	165	53.368	319	33.13	187	32.652	331	45.72	152	11.315	316	31.81	173
29	59.818	303	55.65	133	53.687	306	35.00	179	32.983	320	44.20	114	11.631	305	30.08	147
Aug. 8	60.121	284	54.32	98	53.993	287	36.79	167	33.303	301	43.06	72	11.936	288	28.61	116
18	60.405	259	53.34	62	54.280	263	38.46	150	33.604	275	42.34	29	12.224	265	27.45	84
28	60.664	230	52.72	23	54.543	235	39.96	131	33.879	246	42.05	14	12.489	237	26.61	49
Sept. 7	60.894	197	52.49	13	54.778	206	41.27	111	34.125	212	42.19	56	12.726	207	26.12	15
17	61.091	163	52.62	47	54.984	173	42.38	88	34.337	175	42.75	93	12.933	175	25.97	17
27	61.254	128	53.09	78	55.157	141	43.26	66	34.512	137	43.68	126	13.108	142	26.14	47
Okt. 7	61.382	93	53.87	104	55.298	110	43.92	44	34.649	100	44.94	154	13.250	108	26.61	73
17	61.475	59	54.91	124	55.408	79	44.36	25	34.749	62	46.48	173	13.358	76	27.34	94
26	61.534	27	56.15	137	55.487	49	44.61	6	34.811	28	48.21	184	13.434	44	28.28	110
Nov. 5	61.561	3	57.52	144	55.536	21	44.67	9	34.839	6	50.05	188	13.478	16	29.38	120
15	61.558	31	58.96	144	55.557	5	44.58	23	34.833	37	51.93	183	13.494	12	30.58	123
25	61.527	56	60.40	137	55.552	30	44.35	35	34.796	64	53.76	171	13.482	38	31.81	122
Dez. 5	61.471	78	61.77	125	55.522	54	44.00	43	34.732	88	55.47	152	13.444	62	33.03	115
15	61.393	98	63.02	109	55.468	75	43.57	51	34.644	110	56.99	128	13.382	82	34.18	104
25	61.295	114	64.11	87	55.393	94	43.06	56	34.534	127	58.27	98	13.300	101	35.22	89
35	61.181		64.98		55.299		42.50		34.407		59.25		13.199		36.11	
Mittl. Ort	57.313		83.46		51.155		16.15		30.420		74.06		9.133		55.55	
sec δ, tg δ	1.042		−0.292		1.012		+0.155		1.107		−0.475		1.018		−0.188	
a, *a′*	+2.9		+18.1		+3.2		+18.1		+2.8		+18.1		+3.0		+17.9	
b, *b′*	−0.02		−0.43		+0.01		−0.43		−0.03		−0.43		−0.01		−0.45	

¹) Die jährliche Parallaxe (0.″31) ist bereits berücksichtigt.

Tag	64) α Trianguli AR.		64) α Trianguli Dekl.		63) ε Cassiopeiae AR.		63) ε Cassiopeiae Dekl.		65) ξ Piscium AR.		65) ξ Piscium Dekl.		66) β Arietis AR.		66) β Arietis Dekl.	
1933	$1^h\ 49^m$		+29° 15′		$1^h\ 49^m$		+63° 20′		$1^h\ 50^m$		+2° 51′		$1^h\ 50^m$		+20° 28′	
Jan. 0	15.995	122	25.50	19	33.66	33	50.51	67	5.855	99	31.84	65	56.702	108	63.81	36
10	15.873	138	25.31	44	33.33	36	51.18	13	5.756	113	31.19	60	56.594	122	63.45	51
20	15.735	147	24.87	66	32.97	37	51.31	40	5.643	121	30.59	53	56.472	132	62.94	65
30	15.588	150	24.21	86	32.60	37	50.91	92	5.522	123	30.06	44	56.340	135	62.29	74
Feb. 9	15.438	142	23.35	102	32.23	35	49.99	139	5.399	118	29.62	34	56.205	128	61.55	82
19	15.296	126	22.33	114	31.88	31	48.60	180	5.281	104	29.28	21	56.077	114	60.73	86
März 1	15.170	101	21.19	120	31.57	26	46.80	213	5.177	85	29.07	6	55.963	92	59.87	83
11	15.069	67	19.99	119	31.31	18	44.67	237	5.092	56	29.01	13	55.871	61	59.04	78
21	15.002	25	18.80	113	31.13	10	42.30	249	5.036	23	29.14	32	55.810	24	58.26	66
31	14.977	21	17.67	100	31.03	0	39.81	252	5.013	17	29.46	54	55.786	20	57.60	50
Apr. 10	14.998	71	16.67	81	31.03	9	37.29	244	5.030	60	30.00	77	55.806	66	57.10	30
20	15.069	122	15.86	58	31.12	18	34.85	227	5.090	104	30.77	101	55.872	114	56.80	6
30	15.191	174	15.28	30	31.30	28	32.58	200	5.194	148	31.78	123	55.986	161	56.74	20
Mai 10	15.365	220	14.98	0	31.58	36	30.58	167	5.342	190	33.01	143	56.147	206	56.94	48
20	15.585	263	14.98	30	31.94	44	28.91	127	5.532	229	34.44	162	56.353	246	57.42	74
30	15.848	298	15.28	62	32.38	50	27.64	84	5.761	261	36.06	178	56.599	281	58.16	101
Juni 9	16.146	326	15.90	92	32.88	55	26.80	37	6.022	287	37.84	188	56.880	307	59.17	125
19	16.472	347	16.82	120	33.43	59	26.43	9	6.309	306	39.72	194	57.187	326	60.42	146
29	16.819	356	18.02	143	34.02	61	26.52	57	6.615	316	41.66	195	57.513	337	61.88	162
Juli 9	17.175	360	19.45	165	34.63	61	27.09	102	6.931	320	43.61	192	57.850	340	63.50	176
19	17.535	353	21.10	182	35.24	60	28.11	146	7.251	317	45.53	183	58.190	335	65.26	183
29	17.888	341	22.92	193	35.84	58	29.57	185	7.568	304	47.36	168	58.525	322	67.09	188
Aug. 8	18.229	320	24.85	201	36.42	55	31.42	220	7.872	288	49.04	151	58.847	304	68.97	186
18	18.549	296	26.86	203	36.97	51	33.62	251	8.160	265	50.55	130	59.151	281	70.83	181
28	18.845	267	28.89	202	37.48	46	36.13	277	8.425	238	51.85	105	59.432	254	72.64	172
Sept. 7	19.112	235	30.91	197	37.94	41	38.90	297	8.663	209	52.90	81	59.686	223	74.36	161
17	19.347	201	32.88	188	38.35	34	41.87	310	8.872	178	53.71	55	59.909	191	75.97	145
27	19.548	167	34.76	176	38.69	28	44.97	319	9.050	147	54.26	30	60.100	159	77.42	129
Okt. 7	19.715	132	36.52	163	38.97	21	48.16	321	9.197	115	54.56	6	60.259	127	78.71	112
17	19.847	98	38.15	147	39.18	15	51.37	316	9.312	84	54.62	14	60.386	95	79.83	94
26	19.945	65	39.62	129	39.33	7	54.53	305	9.396	55	54.48	31	60.481	63	80.77	76
Nov. 5	20.010	32	40.91	109	39.40	0	57.58	287	9.451	27	54.17	45	60.544	34	81.53	59
15	20.042	0	42.00	89	39.40	6	60.45	262	9.478	1	53.72	57	60.578	4	82.12	40
25	20.042	30	42.89	67	39.34	14	63.07	229	9.477	27	53.15	63	60.582	24	82.52	23
Dez. 5	20.012	59	43.56	44	39.20	20	65.36	191	9.450	50	52.52	67	60.558	50	82.75	5
15	19.953	87	44.00	19	39.00	25	67.27	147	9.400	72	51.85	69	60.508	75	82.80	11
25	19.866	109	44.19	6	38.75	31	68.74	97	9.328	91	51.16	68	60.433	97	82.69	28
35	19.757		44.13		38.44		69.71		9.237		50.48		60.336		82.41	
Mittl. Ort	15.373		11.43		33.16		27.98		5.082		26.43		56.026		52.49	
sec δ, tg δ	1.146		+0.560		2.229		+1.992		1.001		+0.050		1.068		+0.374	
a, a'	+3.4		+17.8		+4.3		+17.8		+3.1		+17.8		+3.3		+17.7	
b, b'	+0.03		− 0.46		+0.12		− 0.46		0.00		− 0.46		+0.02		− 0.47	

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Tag	67) ψ Phoenicis AR.		67) ψ Phoenicis Dekl.		68) χ Eridani AR.		68) χ Eridani Dekl.		72) α Hydri AR.		72) α Hydri Dekl.		71) υ Ceti AR.		71) υ Ceti Dekl.	
1933	1h 50m		−46° 37′		1h 53m		−51° 55′		1h 56m		−61° 53′		1h 56m		−21° 23′	
Jan. 0	59.072	222	59.12	73	22.612	260	102.23	69	41.57	38	55.57	61	51.898	124	68.71	87
10	58.850	232	59.85	22	22.352	272	102.92	15	41.19	40	56.18	2	51.774	136	69.58	56
20	58.618	237	60.07	29	22.080	275	103.07	39	40.79	40	56.20	56	51.638	143	70.14	24
30	58.381	232	59.78	79	21.805	269	102.68	92	40.39	39	55.64	112	51.495	145	70.38	8
Feb. 9	58.149	219	58.99	128	21.536	255	101.76	141	40.00	36	54.52	166	51.350	140	70.30	41
19	57.930	197	57.71	172	21.281	230	100.35	189	39.64	33	52.86	213	51.210	127	69.89	73
März 1	57.733	168	55.99	213	21.051	197	98.46	231	39.31	29	50.73	257	51.083	106	69.16	105
11	57.565	129	53.86	249	20.854	154	96.15	267	39.02	24	48.16	294	50.977	77	68.11	136
21	57.436	84	51.37	280	20.700	105	93.48	298	38.78	17	45.22	324	50.900	44	66.75	164
31	57.352	34	48.57	305	20.595	49	90.50	323	38.61	10	41.98	347	50.856	4	65.11	190
Apr. 10	57.318	22	45.52	324	20.546	11	87.27	341	38.51	2	38.51	363	50.852	40	63.21	214
20	57.340	79	42.28	336	20.557	75	83.86	352	38.49	6	34.88	372	50.892	86	61.07	233
30	57.419	138	38.92	342	20.632	137	80.34	355	38.55	14	31.16	371	50.978	131	58.74	248
Mai 10	57.557	193	35.50	339	20.769	199	76.79	351	38.69	21	27.45	364	51.109	176	56.26	259
20	57.750	246	32.11	329	20.968	257	73.28	339	38.90	29	23.81	346	51.285	217	53.67	264
30	57.996	292	28.82	312	21.225	309	69.89	318	39.19	35	20.35	323	51.502	253	51.03	263
Juni 9	58.288	332	25.70	286	21.534	354	66.71	291	39.54	42	17.12	291	51.755	283	48.40	255
19	58.620	363	22.84	255	21.888	389	63.80	257	39.96	46	14.21	251	52.038	306	45.85	242
29	58.983	385	20.29	216	22.277	414	61.23	214	40.42	50	11.70	207	52.344	320	43.43	221
Juli 9	59.368	396	18.13	172	22.691	428	59.09	168	40.92	52	9.63	155	52.664	327	41.22	196
19	59.764	396	16.41	123	23.119	431	57.41	116	41.44	53	8.08	99	52.991	325	39.26	164
29	60.160	388	15.18	70	23.550	422	56.25	61	41.97	52	7.09	42	53.316	317	37.62	129
Aug. 8	60.548	367	14.48	16	23.972	402	55.64	5	42.49	49	6.67	18	53.633	300	36.33	90
18	60.915	340	14.32	38	24.374	373	55.59	51	42.98	47	6.85	76	53.933	278	35.43	49
28	61.255	304	14.70	91	24.747	333	56.10	105	43.45	41	7.61	132	54.211	251	34.94	8
Sept. 7	61.559	260	15.61	140	25.080	286	57.15	156	43.86	35	8.93	183	54.462	220	34.86	33
17	61.819	213	17.01	183	25.366	233	58.71	200	44.21	29	10.76	228	54.682	186	35.19	71
27	62.032	162	18.84	219	25.599	177	60.71	236	44.50	21	13.04	263	54.868	150	35.90	105
Okt. 7	62.194	110	21.03	247	25.776	117	63.07	263	44.71	13	15.67	290	55.018	115	36.95	133
17	(19) 62.304	57	23.50	263	(20) 25.893	58	65.70	279	(21) 44.84	5	18.57	303	(21) 55.133	80	38.28	155
26	62.361	6	26.13	271	25.951	0	68.49	285	44.89	3	21.60	307	55.213	46	39.83	169
Nov. 5	62.367	43	28.84	265	25.951	56	71.34	278	44.86	10	24.67	296	55.259	13	41.52	176
15	62.324	87	31.49	251	25.895	107	74.12	261	44.76	17	27.63	275	55.272	18	43.28	175
25	62.237	126	34.00	225	25.788	153	76.73	232	44.59	24	30.38	242	55.254	46	45.03	166
Dez. 5	62.111	162	36.25	192	25.635	192	79.05	197	44.35	30	32.80	201	55.208	72	46.69	151
15	61.949	191	38.17	151	25.443	225	81.02	152	44.05	34	34.81	153	55.136	95	48.20	131
25	61.758	213	39.68	104	25.218	251	82.54	104	43.71	37	36.34	98	55.041	114	49.51	105
35	61.545		40.72		24.967		83.58		43.34		37.32		54.927		50.56	
Mittl. Ort	57.647		49.95		21.011		92.11		39.48		44.00		50.878		66.43	
sec δ, tg δ	1.456		−1.059		1.622		−1.277		2.123		−1.872		1.074		−0.392	
a, a'	+2.4		+17.7		+2.3		+17.6		+1.9		+17.5		+2.8		+17.5	
b, b'	−0.06		−0.47		−0.07		−0.47		−0.11		−0.49		−0.02		−0.49	

Tag	70) 50 Cassiopeiae AR.	Diff.	70) 50 Cassiopeiae Dekl.	Diff.	73) γ Andromedae AR.	Diff.	73) γ Andromedae Dekl.	Diff.	74) α Arietis AR.	Diff.	74) α Arietis Dekl.	Diff.	75) β Trianguli AR.	Diff.	75) β Trianguli Dekl.	Diff.
1933	$1^h\ 57^m$		$+72°\ 5'$		$1^h\ 59^m$		$+42°\ 0'$		$2^h\ 3^m$		$+23°\ 8'$		$2^h\ 5^m$		$+34°\ 40'$	
Jan. 0	40.99	52	77.64	100	47.305	154	50.30	20	24.208	107	59.72	26	33.689	128	32.34	4
10	40.47	57	78.64	43	47.151	176	50.50	17	24.101	125	59.46	43	33.561	148	32.38	24
20	39.90	59	79.07	17	46.975	188	50.33	52	23.976	137	59.03	58	33.413	162	32.14	52
30	39.31	59	78.90	74	46.787	193	49.81	85	23.839	141	58.45	72	33.251	168	31.62	79
Feb. 9	38.72	56	78.16	128	46.594	185	48.96	115	23.698	137	57.73	83	33.083	163	30.83	100
19	38.16	50	76.88	176	46.409	167	47.81	139	23.561	126	56.90	88	32.920	148	29.83	119
März 1	37.66	41	75.12	216	46.242	138	46.42	157	23.435	104	56.02	91	32.772	123	28.64	130
11	37.25	32	72.96	247	46.104	98	44.85	167	23.331	73	55.11	88	32.649	89	27.34	137
21	36.93	19	70.49	266	46.006	49	43.18	170	23.258	36	54.23	78	32.560	47	25.97	135
31	36.74	6	67.83	275	45.957	5	41.48	164	23.222	7	53.45	66	32.513	2	24.62	127
Apr. 10	36.68	7	65.08	273	45.962	63	39.84	151	23.229	54	52.79	47	32.515	55	23.35	112
20	36.75	22	62.35	259	46.025	124	38.33	130	23.283	104	52.32	24	32.570	110	22.23	91
30	36.97	35	59.76	237	46.149	183	37.03	105	23.387	152	52.08	0	32.680	165	21.32	67
Mai 10	37.32	47	57.39	205	46.332	238	35.98	74	23.539	199	52.08	27	32.845	215	20.65	38
20	37.79	58	55.34	167	46.570	288	35.24	40	23.738	241	52.35	55	33.060	262	20.27	6
30	38.37	67	53.67	124	46.858	331	34.84	3	23.979	276	52.90	81	33.322	301	20.21	26
Juni 9	39.04	75	52.43	77	47.189	364	34.81	33	24.255	306	53.71	107	33.623	334	20.47	58
19	39.79	80	51.66	28	47.553	388	35.14	68	24.561	327	54.78	130	33.957	357	21.05	89
29	40.59	83	51.38	23	47.941	403	35.82	103	24.888	340	56.08	148	34.314	371	21.94	117
Juli 9	41.42	85	51.61	72	48.344	408	36.85	134	25.228	345	57.56	164	34.685	377	23.11	142
19	42.27	84	52.33	119	48.752	403	38.19	162	25.573	342	59.20	175	35.062	373	24.53	165
29	43.11	81	53.52	164	49.155	391	39.81	186	25.915	331	60.95	181	35.435	363	26.18	181
Aug. 8	43.92	78	55.16	206	49.546	370	41.67	204	26.246	315	62.76	184	35.798	345	27.99	195
18	44.70	73	57.22	242	49.916	345	43.71	220	26.561	293	64.60	181	36.143	322	29.94	203
28	45.43	66	59.64	275	50.261	314	45.91	230	26.854	267	66.41	175	36.465	295	31.97	207
Sept. 7	46.09	59	62.39	301	50.575	279	48.21	236	27.121	238	68.16	165	36.760	263	34.04	208
17	46.68	50	65.40	321	50.854	242	50.57	237	27.359	207	69.81	154	37.023	230	36.12	204
27	47.18	40	68.61	336	51.096	204	52.94	234	27.566	175	71.35	139	37.253	195	38.16	197
Okt. 7	47.58	31	71.97	343	51.300	164	55.28	227	27.741	143	72.74	124	37.448	159	40.13	187
17	47.89	21	75.40	344	51.464	123	57.55	216	27.884	111	73.98	107	37.607	123	42.00	175
26	48.10	10	78.84	337	51.587	84	59.71	202	27.995	79	75.05	91	37.730	88	43.75	159
Nov. 5	48.20	0	82.21	322	51.671	44	61.73	183	28.074	48	75.96	73	37.818	52	45.34	142
15	48.20	11	85.43	300	51.715	4	63.56	161	28.122	16	76.69	56	37.870	17	46.76	122
25	48.09	22	88.43	268	51.719	34	65.17	136	28.138	13	77.25	38	37.887	18	47.98	99
Dez. 5	47.87	32	91.11	230	51.685	72	66.53	106	28.125	42	77.63	19	37.869	52	48.97	75
15	47.55	41	93.41	185	51.613	107	67.59	74	28.083	69	77.82	1	37.817	84	49.72	48
25	47.14	48	95.26	133	51.506	138	68.33	40	28.014	95	77.83	16	37.733	113	50.20	20
35	46.66		96.59		51.368		68.73		27.919		77.67		37.620		50.40	
Mittl. Ort	40.31		53.80		46.641		32.48		23.460		47.37		32.961		16.51	
sec δ, tg δ	3.254		+3.096		1.346		+0.901		1.088		+0.428		1.216		+0.692	
a, *a'*	+5.1		+17.5		+3.7		+17.4		+3.4		+17.2		+3.6		+17.1	
b, *b'*	+0.18		− 0.49		+0.05		− 0.50		+0.02		− 0.51		+0.04		− 0.52	

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Tag	76) 55 Cassiopeiae AR.		Dekl.		78) Lac. μ Fornacis AR.		Dekl.		80) 67 Ceti AR.		Dekl.		85) ξ² Ceti AR.		Dekl.	
1933	2ʰ 9ᵐ		+66° 12′		2ʰ 9ᵐ		−31° 1′		2ʰ 13ᵐ		−6° 43′		2ʰ 24ᵐ		+8° 9′	
Jan. 0	12ˢ.72	36	64″.86	98	58ˢ.703	146	79″.73	99	39ˢ.366	99	45″.81	82	36ˢ.561	90	46″.20	55
10	12.36	40	65.84	43	58.557	161	80.72	60	39.267	116	46.63	66	36.471	110	45.65	56
20	11.96	43	66.27	12	58.396	171	81.32	19	39.151	128	47.29	49	36.361	125	45.09	54
30	11.53	43	66.15	65	58.225	174	81.51	22	39.023	132	47.78	30	36.236	132	44.55	50
Feb. 9	11.10	41	65.50	116	58.051	169	81.29	62	38.891	132	48.08	10	36.104	133	44.05	46
19	10.69	38	64.34	162	57.882	156	80.67	101	38.759	122	48.18	12	35.971	126	43.59	37
März 1	10.31	32	62.72	200	57.726	136	79.66	139	38.637	105	48.06	35	35.845	109	43.22	27
11	9.99	24	60.72	228	57.590	107	78.27	174	38.532	80	47.71	58	35.736	85	42.95	15
21	9.75	16	58.44	248	57.483	71	76.53	206	38.452	48	47.13	82	35.651	53	42.80	2
31	9.59	6	55.96	256	57.412	30	74.47	233	38.404	10	46.31	105	35.598	15	42.82	19
Apr. 10	9.53	5	53.40	255	57.382	16	72.14	257	38.394	32	45.26	129	35.583	28	43.01	40
20	9.58	16	50.85	242	57.398	64	69.57	276	38.426	76	43.97	151	35.611	74	43.41	62
30	9.74	26	48.43	221	57.462	114	66.81	289	38.502	121	42.46	171	35.685	119	44.03	84
Mai 10	10.00	35	46.22	191	57.576	162	63.92	296	38.623	164	40.75	189	35.804	164	44.87	105
20	10.35	45	44.31	156	57.738	207	60.96	298	38.787	205	38.86	202	35.968	205	45.92	125
30	10.80	52	42.75	115	57.945	248	57.98	291	38.992	240	36.84	211	36.173	242	47.17	144
Juni 9	11.32	58	41.60	71	58.193	282	55.07	278	39.232	269	34.73	215	36.415	272	48.61	158
19	11.90	63	40.89	24	58.475	309	52.29	258	39.501	293	32.58	215	36.687	295	50.19	169
29	12.53	66	40.65	23	58.784	328	49.71	232	39.794	307	30.43	208	36.982	311	51.88	175
Juli 9	13.19	67	40.88	69	59.112	339	47.39	199	40.101	315	28.35	195	37.293	320	53.63	177
19	13.86	67	41.57	114	59.451	341	45.40	160	40.416	316	26.40	177	37.613	321	55.40	173
29	14.53	65	42.71	156	59.792	335	43.80	118	40.732	308	24.63	156	37.934	315	57.13	166
Aug. 8	15.18	63	44.27	194	60.127	321	42.62	72	41.040	295	23.07	128	38.249	303	58.79	153
18	15.81	59	46.21	228	60.448	300	41.90	25	41.335	276	21.79	99	38.552	285	60.32	137
28	16.40	54	48.49	258	60.748	273	41.65	24	41.611	253	20.80	68	38.837	263	61.69	119
Sept. 7	16.94	49	51.07	282	61.021	241	41.89	70	41.864	226	20.12	35	39.100	238	62.88	97
17	17.43	42	53.89	301	61.262	205	42.59	112	42.090	196	19.77	3	39.338	211	63.85	75
27	17.85	36	56.90	314	61.467	168	43.71	150	42.286	166	19.74	27	39.549	182	64.60	52
Okt. 7	18.21	28	60.04	321	61.635	129	45.21	180	42.452	135	20.01	54	39.731	152	65.12	31
17	18.49	20	63.25	322	61.764	89	47.01	204	42.587	103	20.55	76	39.883	122	65.43	12
26*)	18.69	13	66.47	314	61.853	51	49.05	218	42.690	73	21.31	94	40.005	93	65.55	7
Nov. 5	18.82	5	69.61	302	61.904	14	51.23	223	42.763	43	22.25	105	40.098	63	65.48	21
15	18.87	4	72.63	280	61.918	22	53.46	219	42.806	13	23.30	113	40.161	33	65.27	33
25	18.83	12	75.43	253	61.896	56	55.65	205	42.819	14	24.43	115	40.194	4	64.94	42
Dez. 5	18.71	19	77.96	216	61.840	85	57.70	184	42.805	41	25.58	111	40.198	24	64.52	49
15	18.52	26	80.12	175	61.755	113	59.54	157	42.764	66	26.69	103	40.174	51	64.03	54
25	18.26	33	81.87	127	61.642	136	61.11	123	42.698	88	27.72	93	40.123	78	63.49	57
35	17.93		83.14		61.506		62.34		42.610		28.65		40.045		62.92	
Mittl. Ort	11.87		41.92		57.487		75.21		38.396		48.66		35.622		38.32	
sec δ, tg δ	2.479		+2.269		1.167		−0.602		1.007		−0.118		1.010		+0.143	
a, *a′*	+4.7		+16.9		+2.6		+16.9		+3.0		+16.7		+3.2		+16.2	
b, *b′*	+0.13		− 0.53		−0.03		− 0.54		−0.01		− 0.55		+0.01		− 0.59	

*) Bei Stern 85) lies Okt. 27

Tag	87) 36 H. Cassiopeiae				90) μ Hydri				89) ν Arietis				91) δ Ceti			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$2^h\,31^m$		$+72°\,31'$		$2^h\,32^m$		$-79°\,23'$		$2^h\,35^m$		$+21°\,40'$		$2^h\,36^m$		$+0°\,2'$	
Jan. 0	38.61	48	60.38	141	68.48	115	77.67	84	1.367	93	33.85	18	3.801	88	30.89	75
10	38.13	55	61.79	86	67.33	122	78.51	23	1.274	116	33.67	32	3.713	108	30.14	66
20	37.58	60	62.65	29	66.11	124	78.74	38	1.158	135	33.35	45	3.605	125	29.48	55
30	36.98	61	62.94	30	64.87	123	78.36	97	1.023	144	32.90	55	3.480	134	28.93	43
Feb. 9	36.37	61	62.64	85	63.64	119	77.39	152	0.879	148	32.35	65	3.346	137	28.50	29
19	35.76	56	61.79	138	62.45	111	75.87	205	0.731	141	31.70	72	3.209	132	28.21	13
März 1	35.20	49	60.41	183	61.34	102	73.82	249	0.590	124	30.98	74	3.077	117	28.08	4
11	34.71	40	58.58	220	60.32	89	71.33	289	0.466	99	30.24	72	2.960	95	28.12	22
21	34.31	29	56.38	248	59.43	75	68.44	322	0.367	65	29.52	67	2.865	64	28.34	43
31	34.02	17	53.90	265	58.68	58	65.22	347	0.302	24	28.85	55	2.801	28	28.77	64
Apr. 10	33.85	2	51.25	271	58.10	40	61.75	364	0.278	21	28.30	40	2.773	13	29.41	85
20	33.83	12	48.54	266	57.70	22	58.11	374	0.299	70	27.90	22	2.786	58	30.26	108
30	33.95	26	45.88	253	57.48	2	54.37	375	0.369	120	27.68	0	2.844	103	31.34	128
Mai 10	34.21	39	43.35	229	57.46	17	50.62	369	0.489	167	27.68	24	2.947	148	32.62	148
20	34.60	51	41.06	197	57.63	37	46.93	353	0.656	212	27.92	48	3.095	189	34.10	164
30	35.11	62	39.09	161	58.00	55	43.40	331	0.868	251	28.40	72	3.284	227	35.74	178
Juni 9	35.73	72	37.48	118	58.55	71	40.09	300	1.119	284	29.12	94	3.511	258	37.52	188
19	36.45	78	36.30	73	59.26	86	37.09	261	1.403	309	30.06	115	3.769	283	39.40	192
29	37.23	83	35.57	26	60.12	98	34.48	216	1.712	327	31.21	133	4.052	301	41.32	192
Juli 9	38.06	87	35.31	22	61.10	108	32.32	165	2.039	338	32.54	146	4.353	312	43.24	186
19	38.93	88	35.53	70	62.18	114	30.67	110	2.377	340	34.00	156	4.665	314	45.10	176
29	39.81	87	36.23	115	63.32	117	29.57	50	2.717	335	35.56	161	4.979	312	46.86	160
Aug. 8	40.68	85	37.38	158	64.49	117	29.07	10	3.052	323	37.17	163	5.291	301	48.46	140
18	41.53	81	38.96	198	65.66	111	29.17	72	3.375	307	38.80	160	5.592	285	49.86	116
28	42.34	75	40.94	234	66.77	104	29.89	130	3.682	286	40.40	153	5.877	266	51.02	90
Sept. 7	43.09	69	43.28	264	67.81	91	31.19	184	3.968	261	41.93	145	6.143	242	51.92	63
17	43.78	62	45.92	290	68.72	77	33.03	232	4.229	233	43.38	132	6.385	215	52.55	34
27	44.40	53	48.82	310	69.49	59	35.35	272	4.462	205	44.70	119	6.600	187	52.89	7
Okt. 7	44.93	43	51.92	325	70.08	39	38.07	302	4.667	175	45.89	105	6.787	159	52.96	18
17	45.36	33	55.17	332	70.47	17	41.09	320	4.842	144	46.94	90	6.946	129	52.78	40
27	45.69	23	58.49	333	70.64	5	44.29	325	4.986	113	47.84	75	7.075	99	52.38	59
Nov. 5	^{30}45.92	12	61.82	325	^{30}70.59	27	47.54	319	^{30}5.099	82	48.59	60	^{31}7.174	69	51.79	72
15	46.04	0	65.07	311	70.32	48	50.73	300	5.181	49	49.19	46	7.243	39	51.07	83
25	46.04	12	68.18	287	69.84	67	53.73	268	5.230	17	49.65	31	7.282	10	50.24	87
Dez. 5	45.92	23	71.05	256	69.17	85	56.41	227	5.247	16	49.96	18	7.292	20	49.37	89
15	45.69	34	73.61	217	68.32	99	58.68	178	5.231	47	50.14	3	7.272	47	48.48	86
25	45.35	43	75.78	171	67.33	111	60.46	123	5.184	77	50.17	12	7.225	74	47.62	82
35	44.92		77.49		66.22		61.69		5.107		50.05		7.151		46.80	
Mittl. Ort	37.11		36.88		62.78		66.75		0.408		21.68		2.760		25.34	
sec δ, tg δ	3.331		+3.177		5.436		−5.345		1.076		+0.397		1.000		+0.001	
a, *a′*	+5.7		+15.8		−1.3		+15.7		+3.4		+15.6		+3.1		+15.6	
b, *b′*	+0.17		− 0.61		−0.28		− 0.62		+0.02		− 0.63		0.00		− 0.63	

Tag	93) ϑ Persei AR.		93) ϑ Persei Dekl.		97) π Ceti AR.		97) π Ceti Dekl.		98) μ Ceti AR.		98) μ Ceti Dekl.		100) 41 Arietis AR.		100) 41 Arietis Dekl.	
1933	2h 39m		+48° 56′		2h 40m		−14° 7′		2h 41m		+9° 49′		2h 46m		+26° 59′	
Jan. 0	37.786	159	65.90	73	57.136	99	88.18	104	20.034	83	64.69	51	3.093	93	21.42	3
10	37.627	193	66.63	34	57.037	121	89.22	82	19.951	106	64.18	52	3.000	119	21.45	15
20	37.434	219	66.97	5	56.916	137	90.04	56	19.845	124	63.66	51	2.881	141	21.30	34
30	37.215	234	66.92	46	56.779	147	90.60	29	19.721	135	63.15	50	2.740	155	20.96	51
Feb. 9	36.981	235	66.46	83	56.632	149	90.89	1	19.586	139	62.65	46	2.585	159	20.45	66
19	36.746	224	65.63	116	56.483	144	90.90	28	19.447	134	62.19	41	2.426	153	19.79	79
März 1	36.522	199	64.47	145	56.339	131	90.62	56	19.313	120	61.78	32	2.273	139	19.00	86
11	36.323	160	63.02	167	56.208	108	90.06	84	19.193	97	61.46	21	2.134	112	18.14	90
21	36.163	112	61.35	180	56.100	78	89.22	112	19.096	67	61.25	7	2.022	78	17.24	89
31	36.051	53	59.55	186	56.022	43	88.10	139	19.029	29	61.18	9	1.944	37	16.35	82
Apr. 10	35.998	12	57.69	183	55.979	1	86.71	163	19.000	13	61.27	28	1.907	11	15.53	71
20	36.010	79	55.86	173	55.978	44	85.08	186	19.013	59	61.55	48	1.918	62	14.82	55
30	36.089	147	54.13	155	56.022	89	83.22	205	19.072	105	62.03	70	1.980	113	14.27	34
Mai 10	36.236	213	52.58	130	56.111	135	81.17	221	19.177	150	62.73	90	2.093	163	13.93	12
20	36.449	273	51.28	102	56.246	177	78.96	233	19.327	193	63.63	111	2.256	210	13.81	13
30	36.722	327	50.26	69	56.423	217	76.63	239	19.520	232	64.74	129	2.466	252	13.94	38
Juni 9	37.049	372	49.57	34	56.640	250	74.24	238	19.752	263	66.03	145	2.718	287	14.32	63
19	37.421	407	49.23	3	56.890	277	71.86	234	20.015	290	67.48	158	3.005	315	14.95	86
29	37.828	432	49.26	39	57.167	297	69.52	222	20.305	307	69.06	163	3.320	335	15.81	107
Juli 9	38.260	447	49.65	73	57.464	310	67.30	204	20.612	318	70.69	167	3.655	347	16.88	126
19	38.707	452	50.38	107	57.774	315	65.26	181	20.930	322	72.36	166	4.002	352	18.14	140
29	39.159	447	51.45	136	58.089	313	63.45	153	21.252	319	74.02	160	4.354	349	19.54	150
Aug. 8	39.606	435	52.81	164	58.402	305	61.92	119	21.571	308	75.62	150	4.703	339	21.04	158
18	40.041	415	54.45	186	58.707	289	60.73	84	21.879	294	77.12	136	5.042	323	22.62	160
28	40.456	389	56.31	205	58.996	270	59.89	46	22.173	275	78.48	118	5.365	303	24.22	159
Sept. 7	40.845	357	58.36	220	59.266	246	59.43	7	22.448	251	79.66	99	5.668	280	25.81	155
17	41.202	322	60.56	230	59.512	219	59.36	31	22.699	226	80.65	78	5.948	253	27.36	148
27	41.524	283	62.86	236	59.731	189	59.67	65	22.925	198	81.43	56	6.201	224	28.84	139
Okt. 7	41.807	243	65.22	238	59.920	159	60.32	96	23.123	170	81.99	36	6.425	194	30.23	129
17	42.050	199	67.60	237	60.079	127	61.28	122	23.293	141	82.35	17	6.619	163	31.52	117
27	42.249	153	69.97	230	60.206	96	62.50	141	23.434	112	82.52	0	6.782	131	32.69	104
Nov. 5	[1] 42.402	107	72.27	219	[1] 60.302	64	63.91	154	[1] 23.546	81	82.52	14	[2] 6.913	97	33.73	90
15	42.509	58	74.46	203	60.366	31	65.45	160	23.627	51	82.38	27	7.010	63	34.63	76
25	42.567	8	76.49	183	60.397	0	67.05	158	23.678	20	82.11	36	7.073	28	35.39	62
Dez. 5	42.575	41	78.32	157	60.397	30	68.63	151	23.698	10	81.75	43	7.101	7	36.01	46
15	42.534	90	79.89	128	60.367	59	70.14	138	23.688	40	81.32	48	7.094	42	36.47	29
25	42.444	133	81.17	93	60.308	86	71.52	120	23.648	68	80.84	51	7.052	75	36.76	12
35	42.311		82.10		60.222		72.72		23.580		80.33		6.977		36.88	
Mittl. Ort	36.722		46.58		55.970		89.58		19.008		56.04		2.065		7.71	
sec δ, tg δ	1.523		+1.148		1.031		−0.252		1.015		+0.173		1.122		+0.509	
a, a′	+4.1		+15.4		+2.9		+15.3		+3.2		+15.3		+3.5		+15.0	
b, b′	+0.06		− 0.64		−0.01		− 0.65		+0.01		− 0.65		+0.03		− 0.66	

Tag	101) β Fornacis AR.	Δ	101) β Fornacis Dekl.	Δ	102) τ^2 Eridani AR.	Δ	102) τ^2 Eridani Dekl.	Δ	103) τ Persei AR.	Δ	103) τ Persei Dekl.	Δ	104) η Eridani AR.	Δ	104) η Eridani Dekl.	Δ
1933	$2^h\,46^m$		$-32°\,40'$		$2^h\,47^m$		$-21°\,16'$		$2^h\,49^m$		$+52°\,29'$		$2^h\,53^m$		$-9°\,9'$	
Jan. 0	18.570	141	74.88	131	61.199	110	46.71	121	30.855	170	42.63	94	10.356	88	46.84	102
10	18.429	164	76.19	92	61.089	132	47.92	90	30.685	211	43.57	53	10.268	112	47.86	82
20	18.265	181	77.11	50	60.957	150	48.82	58	30.474	241	44.10	11	10.156	130	48.68	62
30	18.084	191	77.61	7	60.807	160	49.40	24	30.233	259	44.21	32	10.026	143	49.30	40
Feb. 9	17.893	193	77.68	37	60.647	164	49.64	10	29.974	263	43.89	72	9.883	148	49.70	16
19	17.700	186	77.31	78	60.483	159	49.54	44	29.711	253	43.17	111	9.735	144	49.86	8
März 1	17.514	170	76.53	119	60.324	145	49.10	79	29.458	228	42.06	142	9.591	133	49.78	33
11	17.344	147	75.34	158	60.179	124	48.31	111	29.230	189	40.64	169	9.458	112	49.45	59
21	17.197	113	73.76	193	60.055	94	47.20	142	29.041	137	38.95	186	9.346	84	48.86	83
31	17.084	75	71.83	223	59.961	57	45.78	171	28.904	76	37.09	196	9.262	49	48.03	109
Apr. 10	17.009	29	69.60	251	59.904	15	44.07	197	28.828	7	35.13	197	9.213	9	46.94	132
20	16.980	19	67.09	273	59.889	30	42.10	220	28.821	65	33.16	190	9.204	35	45.62	155
30	16.999	70	64.36	290	59.919	77	39.90	240	28.886	139	31.26	174	9.239	81	44.07	176
Mai 10	17.069	121	61.46	301	59.996	124	37.50	253	29.025	209	29.52	153	9.320	126	42.31	193
20	17.190	168	58.45	305	60.120	168	34.97	263	29.234	276	27.99	125	9.446	169	40.38	206
30	17.358	214	55.40	303	60.288	209	32.34	265	29.510	333	26.74	94	9.615	208	38.32	216
Juni 9	17.572	253	52.37	292	60.497	245	29.69	262	29.843	385	25.80	58	9.823	242	36.16	219
19	17.825	286	49.45	275	60.742	275	27.07	252	30.228	424	25.22	22	10.065	270	33.97	219
29	18.111	311	46.70	250	61.017	297	24.55	236	30.652	453	25.00	16	10.335	291	31.78	211
Juli 9	18.422	329	44.20	219	61.314	312	22.19	212	31.105	472	25.16	52	10.626	304	29.67	199
19	18.751	338	42.01	182	61.626	319	20.07	184	31.577	480	25.68	88	10.930	312	27.68	179
29	19.089	339	40.19	138	61.945	319	18.23	149	32.057	478	26.56	120	11.242	311	25.89	156
Aug. 8	19.428	332	38.81	92	62.264	312	16.74	111	32.535	467	27.76	150	11.553	304	24.33	128
18	19.760	318	37.89	42	62.576	299	15.63	69	33.002	449	29.26	176	11.857	291	23.05	96
28	20.078	297	37.47	8	62.875	278	14.94	26	33.451	423	31.02	198	12.148	274	22.09	62
Sept. 7	20.375	271	37.55	58	63.153	256	14.68	18	33.874	392	33.00	217	12.422	252	21.47	27
17	20.646	240	38.13	105	63.409	228	14.86	60	34.266	355	35.17	231	12.674	227	21.20	9
27	20.886	205	39.18	148	63.637	198	15.46	98	34.621	316	37.48	242	12.901	200	21.29	41
Okt. 7	21.091	168	40.66	184	63.835	165	16.44	133	34.937	272	39.90	246	13.101	171	21.70	71
17	21.259	130	42.50	213	64.000	132	17.77	159	35.209	227	42.36	248	13.272	141	22.41	97
27	21.389	91	44.63	233	64.132	99	19.36	181	35.436	177	44.84	244	13.413	111	23.38	117
Nov. 5	[2] 21.480	51	46.96	242	[3] 64.231	64	21.17	192	[3] 35.613	126	47.28	236	[4] 13.524	79	24.55	131
15	21.531	12	49.38	242	64.295	30	23.09	197	35.739	73	49.64	223	13.603	48	25.86	139
25	21.543	26	51.80	233	64.325	3	25.06	192	35.812	17	51.87	203	13.651	17	27.25	140
Dez. 5	21.517	62	54.13	215	64.322	36	26.98	182	35.829	38	53.90	179	13.668	14	28.65	136
15	21.455	96	56.28	189	64.286	66	28.80	163	35.791	91	55.69	149	13.654	45	30.01	127
25	21.359	126	58.17	157	64.220	96	30.43	139	35.700	143	57.18	115	13.609	74	31.28	114
35	21.233		59.74		64.124		31.82		35.557		58.33		13.535		32.42	
Mittl. Ort	17.147		71.53		59.928		46.35		29.648		22.73		9.173		50.04	
sec δ, tg δ	1.188		−0.642		1.073		−0.390		1.642		+1.303		1.013		−0.161	
a, a'	+2.5		+15.0		+2.7		+14.9		+4.2		+14.8		+2.9		+14.6	
b, b'	−0.03		− 0.66		−0.02		− 0.67		+0.06		− 0.67		−0.01		− 0.69	

Tag	106) θ Eridani AR.	Diff.	106) θ Eridani Dekl.	Diff.	105) 47 H. Cephei AR.	Diff.	105) 47 H. Cephei Dekl.	Diff.
1933	2h 55m		−40° 33′		2h 57m		+79° 9′	
Jan. 0	44.734	170	85.04	146	8.92	76	47.46	188
10	44.564	196	86.50	102	8.16	89	49.34	134
20	44.368	216	87.52	53	7.27	98	50.68	76
30	44.152	227	88.05	5	6.29	102	51.44	14
Feb. 9	43.925	230	88.10	43	5.27	103	51.58	46
19	43.695	224	87.67	91	4.24	98	51.12	104
März 1	43.471	207	86.76	135	3.26	90	50.08	156
11	43.264	182	85.41	177	2.36	76	48.52	203
21	43.082	147	83.64	215	1.60	60	46.49	239
31	42.935	106	81.49	248	1.00	41	44.10	265
Apr. 10	42.829	58	79.01	277	0.59	19	41.45	281
20	42.771	5	76.24	300	0.40	2	38.64	285
30	42.766	49	73.24	316	0.42	24	35.79	279
Mai 10	42.815	104	70.08	325	0.66	46	33.00	263
20	42.919	158	66.83	328	1.12	66	30.37	239
30	43.077	207	63.55	323	1.78	85	27.98	207
Juni 9	43.284	252	60.32	310	2.63	100	25.91	168
19	43.536	291	57.22	290	3.63	113	24.23	125
29	43.827	320	54.32	261	4.76	123	22.98	80
Juli 9	44.147	343	51.71	225	5.99	130	22.18	31
19	44.490	357	49.46	184	7.29	135	21.87	18
29	44.847	360	47.62	136	8.64	136	22.05	66
Aug. 8	45.207	357	46.26	85	10.00	135	22.71	112
18	45.564	344	45.41	31	11.35	131	23.83	157
28	45.908	324	45.10	24	12.66	125	25.40	198
Sept. 7	46.232	296	45.34	78	13.91	116	27.38	235
17	46.528	263	46.12	129	15.07	106	29.73	269
27	46.791	227	47.41	175	16.13	93	32.42	296
Okt. 7	47.018	185	49.16	214	17.06	79	35.38	318
17	47.203	141	51.30	244	17.85	64	38.56	334
27	47.344	97	53.74	265	18.49	46	41.90	343
Nov. 5*)	5 47.441	52	56.39	274	5 18.95	28	45.33	343
15	47.493	7	59.13	274	19.23	8	48.76	336
25	47.500	37	61.87	262	19.31	11	52.12	320
Dez. 5	47.463	80	64.49	241	19.20	31	55.32	294
15	47.383	117	66.90	211	18.89	49	58.26	259
25	47.266	153	69.01	175	18.40	66	60.85	216
35	47.113		70.76		17.74		63.01	
Mittl. Ort	43.109		80.39		5.84		23.97	
sec δ, tg δ	1.317		−0.856		5.316		+5.221	
a, a′	+2.3		+14.4		+7.9		+14.4	
b, b′	−0.04		− 0.69		+0.25		− 0.70	

Tag	107) α Ceti AR.	Diff.	107) α Ceti Dekl.	Diff.	108) γ Persei AR.	Diff.	108) γ Persei Dekl.	Diff.
1933	2h 58m		+3° 49′		2h 59m		+53° 14′	
Jan. 0	47.596	77	47.50	69	57.154	165	63.58	105
10	47.519	101	46.81	63	56.989	208	64.63	65
20	47.418	122	46.18	55	56.781	243	65.28	23
30	47.296	136	45.63	47	56.538	264	65.51	19
Feb. 9	47.160	143	45.16	37	56.274	271	65.32	62
19	47.017	141	44.79	25	56.003	264	64.70	100
März 1	46.876	130	44.54	11	55.739	242	63.70	135
11	46.746	110	44.43	4	55.497	203	62.35	161
21	46.636	82	44.47	21	55.294	154	60.74	183
31	46.554	47	44.68	40	55.140	92	58.91	194
Apr. 10	46.507	6	45.08	60	55.048	23	56.97	198
20	46.501	39	45.68	80	55.025	49	54.99	193
30	46.540	84	46.48	101	55.074	124	53.06	181
Mai 10	46.624	129	47.49	120	55.198	197	51.25	161
20	46.753	172	48.69	138	55.395	265	49.64	135
30	46.925	211	50.07	153	55.660	327	48.29	105
Juni 9	47.136	245	51.60	165	55.987	379	47.24	71
19	47.381	273	53.25	173	56.366	421	46.53	36
29	47.654	294	54.98	175	56.787	454	46.17	1
Juli 9	47.948	308	56.73	175	57.241	475	46.18	37
19	48.256	313	58.48	167	57.716	487	46.55	73
29	48.569	314	60.15	156	58.203	487	47.28	106
Aug. 8	48.883	306	61.71	139	58.690	479	48.34	136
18	49.189	295	63.10	120	59.169	462	49.70	163
28	49.484	278	64.30	97	59.631	439	51.33	187
Sept. 7	49.762	258	65.27	73	60.070	410	53.20	207
17	50.020	234	66.00	47	60.480	374	55.27	223
27	50.254	208	66.47	22	60.854	335	57.50	234
Okt. 7	50.462	182	66.69	2	61.189	294	59.84	242
17	50.644	153	66.67	24	61.483	247	62.26	245
27	50.797	124	66.43	41	61.730	198	64.71	244
Nov. 5*)	5 50.921	94	66.02	56	6 61.928	145	67.15	237
15	51.015	64	65.46	67	62.073	91	69.52	226
25	51.079	32	64.79	73	62.164	33	71.78	209
Dez. 5	51.111	1	64.06	76	62.197	24	73.87	187
15	51.112	30	63.30	76	62.173	80	75.74	158
25	51.082	61	62.54	74	62.093	135	77.32	126
35	51.021		61.80		61.958		78.58	
Mittl. Ort	46.457		40.41		55.821		43.75	
sec δ, tg δ	1.002		+0.067		1.671		+1.339	
a, a′	+3.1		+14.3		+4.3		+14.2	
b, b′	0.00		− 0.70		+0.06		− 0.71	

*) Bei Stern 108) lies Nov. 6

Tag	109) ρ Persei AR.		109) ρ Persei Dekl.		110) μ Horologii AR.		110) μ Horologii Dekl.		111) β Persei AR.		111) β Persei Dekl.		114) δ Arietis AR.		114) δ Arietis Dekl.	
1933	3h 0m		+38° 34′		3h 2m		−59° 59′		3h 3m		+40° 41′		3h 7m		+19° 28′	
Jan. 0	53.691	105	71.69	49	4.249	328	57.54	152	49.287	109	72.93	61	48.764	73	39.89	16
10	53.586	139	72.18	25	3.921	367	59.06	97	49.178	144	73.54	32	48.691	102	39.73	26
20	53.447	166	72.43	5	3.554	393	60.03	41	49.034	173	73.86	1	48.589	127	39.47	35
30	53.281	185	72.38	35	3.161	403	60.44	17	48.861	193	73.87	30	48.462	143	39.12	44
Feb. 9	53.096	192	72.03	62	2.758	407	60.27	74	48.668	200	73.57	59	48.319	152	38.68	50
19	52.904	188	71.41	87	2.351	391	59.53	127	48.468	198	72.98	87	48.167	151	38.18	54
März 1	52.716	173	70.54	107	1.960	367	58.26	178	48.270	182	72.11	109	48.016	141	37.64	56
11	52.543	146	69.47	122	1.593	329	56.48	224	48.088	154	71.02	127	47.875	120	37.08	55
21	52.397	107	68.25	132	1.264	280	54.24	263	47.934	115	69.75	138	47.755	91	36.53	50
31	52.290	62	66.93	134	0.984	220	51.61	299	47.819	68	68.37	142	47.664	53	36.03	42
Apr. 10	52.228	8	65.59	131	0.764	153	48.62	326	47.751	13	66.95	141	47.611	11	35.61	29
20	52.220	49	64.28	121	0.611	79	45.36	347	47.738	45	65.54	131	47.600	37	35.32	12
30	52.269	107	63.07	105	0.532	2	41.89	360	47.783	105	64.23	117	47.637	86	35.20	6
Mai 10	52.376	164	62.02	83	0.530	76	38.29	365	47.888	164	63.06	96	47.723	134	35.26	25
20	52.540	218	61.19	60	0.606	152	34.64	363	48.052	219	62.10	73	47.857	180	35.51	46
30	52.758	266	60.59	32	0.758	228	31.01	350	48.271	270	61.37	45	48.037	221	35.97	68
Juni 9	53.024	308	60.27	4	0.986	297	27.51	331	48.541	312	60.92	16	48.258	258	36.65	87
19	53.332	341	60.23	26	1.283	355	24.20	302	48.853	347	60.76	14	48.516	288	37.52	104
29	53.673	367	60.49	53	1.638	406	21.18	266	49.200	374	60.90	43	48.804	309	38.56	120
Juli 9	54.040	382	61.02	80	2.044	446	18.52	223	49.574	392	61.33	71	49.113	325	39.76	130
19	54.422	391	61.82	105	2.490	472	16.29	172	49.966	399	62.04	97	49.438	332	41.06	139
29	54.813	390	62.87	125	2.962	488	14.57	117	50.365	401	63.01	120	49.770	333	42.45	141
Aug. 8	55.203	383	64.12	143	3.450	489	13.40	59	50.766	393	64.21	140	50.103	327	43.86	142
18	55.586	369	65.55	158	3.939	476	12.81	3	51.159	380	65.61	156	50.430	316	45.28	137
28	55.955	350	67.13	169	4.415	449	12.84	63	51.539	360	67.17	168	50.746	300	46.65	130
Sept. 7	56.305	326	68.82	175	4.864	413	13.47	123	51.899	337	68.85	178	51.046	280	47.95	119
17	56.631	298	70.57	179	5.277	364	14.70	178	52.236	309	70.63	184	51.326	257	49.14	107
27	56.929	268	72.36	181	5.641	307	16.48	227	52.545	278	72.47	187	51.583	232	50.21	94
Okt. 7	57.197	236	74.17	178	5.948	245	18.75	267	52.823	246	74.34	186	51.815	205	51.15	79
17	57.433	201	75.95	173	6.193	172	21.42	297	53.069	210	76.20	184	52.020	177	51.94	65
27	57.634	165	77.68	167	6.365	99	24.39	316	53.279	172	78.04	177	52.197	147	52.59	51
Nov. 6	57.799	126	79.35	157	6.464	23	27.55	323	53.451	132	79.81	168	52.344	116	53.10	39
15	57.925	86	80.92	144	6.487	52	30.78	317	53.583	90	81.49	157	52.460	83	53.49	27
25	58.011	44	82.36	129	6.435	124	33.95	299	53.673	47	83.06	141	52.543	49	53.76	17
Dez. 5	58.055	0	83.65	111	6.311	191	36.94	271	53.720	3	84.47	123	52.592	14	53.93	6
15	58.055	41	84.76	89	6.120	250	39.65	232	53.723	43	85.70	101	52.606	20	53.99	4
25	58.014	82	85.65	65	5.870	304	41.97	186	53.680	85	86.71	76	52.586	54	53.95	13
35	57.932		86.30		5.566		43.83		53.595		87.47		52.532		53.82	
Mittl. Ort	52.517		55.07		1.812		50.03		48.073		55.86		47.605		28.30	
sec δ, tg δ	1.279		+0.798		2.000		−1.732		1.319		+0.860		1.061		+0.354	
a, a′	+3.8		+14.1		+1.4		+14.0		+3.9		+13.9		+3.4		+13.7	
b, b′	+0.04		−0.71		−0.08		−0.71		+0.04		−0.72		+0.02		−0.73	

Tag	117) 12 Eridani AR.		117) 12 Eridani Dekl.		115) 48 H. Cephei AR.		115) 48 H. Cephei Dekl.		120) α Persei AR.		120) α Persei Dekl.		121) o Tauri AR.		121) o Tauri Dekl.	
1933	3h 9m		−29° 14′		3h 11m		+77° 29′		3h 19m		+49° 37′		3h 21m		+8° 47′	
Jan. 0	14.865	120	62.76	146	47.95	59	51.93	198	33.172	126	45.81	105	13.527	64	47.88	55
10	14.745	147	64.22	110	47.36	73	53.91	147	33.046	171	46.86	72	13.463	93	47.33	52
20	14.598	168	65.32	71	46.63	82	55.38	90	32.875	209	47.58	34	13.370	118	46.81	50
30	14.430	183	66.03	31	45.81	86	56.28	31	32.666	235	47.92	5	13.252	136	46.31	46
Feb. 9	14.247	189	66.34	11	44.95	89	56.59	29	32.431	248	47.87	42	13.116	147	45.85	40
19	14.058	188	66.23	52	44.06	86	56.30	86	32.183	246	47.45	79	12.969	149	45.45	34
März 1	13.870	177	65.71	91	43.20	80	55.44	140	31.937	232	46.66	111	12.820	142	45.11	25
11	13.693	156	64.80	130	42.40	69	54.04	186	31.705	202	45.55	138	12.678	124	44.86	15
21	13.537	127	63.50	165	41.71	56	52.18	225	31.503	159	44.17	159	12.554	98	44.71	3
31	13.410	91	61.85	198	41.15	40	49.93	254	31.344	105	42.58	172	12.456	65	44.68	13
Apr. 10	13.319	48	59.87	226	40.75	22	47.39	272	31.239	44	40.86	178	12.391	24	44.81	29
20	13.271	2	57.61	251	40.53	3	44.67	280	31.195	23	39.08	175	12.367	19	45.10	47
30	13.269	47	55.10	272	40.50	17	41.87	276	31.218	92	37.33	166	12.386	66	45.57	66
Mai 10	13.316	97	52.38	285	40.67	36	39.11	265	31.310	160	35.67	150	12.452	112	46.23	85
20	13.413	144	49.53	293	41.03	53	36.46	243	31.470	226	34.17	127	12.564	156	47.08	103
30	13.557	190	46.60	295	41.56	69	34.03	213	31.696	285	32.90	102	12.720	197	48.11	120
Juni 9	13.747	230	43.65	289	42.25	85	31.90	179	31.981	337	31.88	72	12.917	234	49.31	133
19	13.977	265	40.76	276	43.10	96	30.11	138	32.318	380	31.16	40	13.151	263	50.64	145
29	14.242	292	38.00	256	44.06	106	28.73	95	32.698	414	30.76	7	13.414	288	52.09	151
Juli 9	14.534	312	35.44	229	45.12	114	27.78	48	33.112	438	30.69	26	13.702	303	53.60	154
19	14.846	325	33.15	195	46.26	118	27.30	1	33.550	452	30.95	57	14.005	314	55.14	152
29	15.171	330	31.20	156	47.44	120	27.29	46	34.002	458	31.52	87	14.319	316	56.66	145
Aug. 8	15.501	327	29.64	112	48.64	120	27.75	92	34.460	453	32.39	115	14.635	313	58.11	135
18	15.828	316	28.52	65	49.84	117	28.67	136	34.913	442	33.54	139	14.948	304	59.46	120
28	16.144	301	27.87	15	51.01	113	30.03	178	35.355	424	34.93	160	15.252	290	60.66	102
Sept. 7	16.445	279	27.72	34	52.14	107	31.81	215	35.779	401	36.53	179	15.542	274	61.68	82
17	16.724	253	28.06	82	53.21	98	33.96	249	36.180	372	38.32	193	15.816	253	62.50	61
27	16.977	223	28.88	126	54.19	87	36.45	278	36.552	339	40.25	205	16.069	230	63.11	39
Okt. 7	17.200	190	30.14	164	55.06	76	39.23	301	36.891	302	42.30	212	16.299	205	63.50	18
17	17.390	155	31.78	196	55.82	63	42.24	320	37.193	262	44.42	216	16.504	178	63.68	1
27	17.545	118	33.74	219	56.45	49	45.44	330	37.455	218	46.58	217	16.682	151	63.67	18
Nov. 6	17.663	80	35.93	233	56.94	33	48.74	334	37.673	171	48.75	212	16.833	120	63.49	32
15	17.743	42	38.26	238	57.27	15	52.08	330	37.844	120	50.87	205	16.953	89	63.17	42
25	17.785	4	40.64	233	57.42	2	55.38	317	37.964	68	52.92	191	17.042	56	62.75	50
Dez. 5	17.789	33	42.97	219	57.40	19	58.55	295	38.032	12	54.83	174	17.098	23	62.25	55
15	17.756	69	45.16	198	57.21	35	61.50	263	38.044	42	56.57	150	17.121	11	61.70	57
25	17.687	102	47.14	169	56.86	51	64.13	224	38.002	96	58.07	123	17.110	45	61.13	58
35	17.585		48.83		56.35		66.37		37.906		59.30		17.065		60.55	
Mittl. Ort	13.398		61.24		44.76		29.09		31.705		27.20		12.291		39.17	
sec δ, tg δ	1.146		−0.560		4.618		+4.508		1.544		+1.176		1.012		+0.155	
a, *a′*	+2.5		+13.6		+7.5		+13.4		+4.3		+12.9		+3.2		+12.8	
b, *b′*	−0.03		− 0.73		+0.20		− 0.74		+0.05		− 0.76		+0.01		− 0.77	

Tag	122) 2 H. Camelop. AR.		Dekl.		125) *f* Tauri AR.		Dekl.	
1933	$3^h\,23^m$		$+59°\,42'$		$3^h\,27^m$		$+12°\,42'$	
Jan. 0	39.376	183	51.60	148	11.499	59	39.25	40
10	39.193	242	53.08	107	11.440	91	38.85	41
20	38.951	289	54.15	63	11.349	117	38.44	42
30	38.662	321	54.78	16	11.232	137	38.02	43
Feb. 9	38.341	338	54.94	32	11.095	149	37.59	41
19	38.003	337	54.62	76	10.946	152	37.18	39
März 1	37.666	316	53.86	118	10.794	145	36.79	34
11	37.350	278	52.68	154	10.649	129	36.45	28
21	37.072	223	51.14	182	10.520	102	36.17	18
31	36.849	157	49.32	204	10.418	69	35.99	7
Apr. 10	36.692	78	47.28	216	10.349	29	35.92	8
20	36.614	6	45.12	219	10.320	15	36.00	23
30	36.620	93	42.93	213	10.335	63	36.23	42
Mai 10	36.713	179	40.80	199	10.398	110	36.65	61
20	36.892	262	38.81	179	10.508	154	37.26	79
30	37.154	336	37.02	153	10.662	197	38.05	96
Juni 9	37.490	403	35.49	122	10.859	233	39.01	112
19	37.893	459	34.27	86	11.092	265	40.13	124
29	38.352	503	33.41	50	11.357	288	41.37	135
Juli 9	38.855	535	32.91	12	11.645	307	42.72	140
19	39.390	556	32.79	26	11.952	316	44.12	141
29	39.946	566	33.05	62	12.268	321	45.53	139
Aug. 8	40.512	563	33.67	98	12.589	318	46.92	131
18	41.075	553	34.65	131	12.907	310	48.23	121
28	41.628	532	35.96	161	13.217	297	49.44	107
Sept. 7	42.160	504	37.57	187	13.514	281	50.51	91
17	42.664	469	39.44	210	13.795	261	51.42	73
27	43.133	427	41.54	230	14.056	238	52.15	54
Okt. 7	43.560	382	43.84	245	14.294	214	52.69	36
17	43.942	329	46.29	255	14.508	189	53.05	19
27	44.271	271	48.84	261	14.697	160	53.24	4
Nov. 6	44.542	210	51.45	261	14.857	130	53.28	9
15	[12] 44.752	142	54.06	255	[13] 14.987	98	53.19	20
25	44.894	72	56.61	244	15.085	65	52.99	27
Dez. 5	44.966	1	59.05	225	15.150	30	52.72	34
15	44.965	74	61.30	199	15.180	6	52.38	38
25	44.891	143	63.29	169	15.174	40	52.00	41
35	44.748		64.98		15.134		51.59	
Mittl. Ort	37.589		31.36		10.238		29.49	
sec δ, tg δ	1.983		+1.712		1.025		+0.226	
a, *a'*	+4.8		+12.6		+3.3		+12.4	
b, *b'*	+0.07		− 0.78		+0.01		− 0.79	

Tag	127) ε Eridani [1]) AR.		Dekl.		131) δ Persei AR.		Dekl.	
1933	$3^h\,29^m$		$-9°\,40'$		$3^h\,38^m$		$+47°\,34'$	
Jan. 0	47.699	75	58.98	117	10.313	99	47.32	110
10	47.624	104	60.15	96	10.214	147	48.42	78
20	47.520	129	61.11	75	10.067	187	49.20	46
30	47.391	147	61.86	51	9.880	217	49.66	10
Feb. 9	47.244	157	62.37	26	9.663	236	49.76	25
19	47.087	160	62.63	0	9.427	239	49.51	60
März 1	46.927	153	62.63	25	9.188	231	48.91	92
11	46.774	137	62.38	52	8.957	206	47.99	119
21	46.637	113	61.86	77	8.751	169	46.80	140
31	46.524	80	61.09	102	8.582	120	45.40	156
Apr. 10	46.444	42	60.07	127	8.462	63	43.84	162
20	46.402	1	58.80	150	8.399	1	42.22	164
30	46.403	46	57.30	170	8.398	66	40.58	157
Mai 10	46.449	92	55.60	188	8.464	132	39.01	143
20	46.541	136	53.72	202	8.596	196	37.58	126
30	46.677	178	51.70	213	8.792	255	36.32	103
Juni 9	46.855	214	49.57	217	9.047	308	35.29	77
19	47.069	246	47.40	216	9.355	352	34.52	48
29	47.315	271	45.24	211	9.707	387	34.04	18
Juli 9	47.586	290	43.13	198	10.094	415	33.86	12
19	47.876	301	41.15	181	10.509	432	33.98	40
29	48.177	306	39.34	157	10.941	440	34.38	68
Aug. 8	48.483	305	37.77	129	11.381	441	35.06	94
18	48.788	297	36.48	96	11.822	434	36.00	117
28	49.085	284	35.52	62	12.256	421	37.17	137
Sept. 7	49.369	268	34.90	26	12.677	401	38.54	155
17	49.637	247	34.64	12	13.078	376	40.09	168
27	49.884	224	34.76	46	13.454	349	41.77	180
Okt. 7	50.108	198	35.22	78	13.803	315	43.57	188
17	50.306	171	36.00	106	14.118	279	45.45	194
27	50.477	141	37.06	128	14.397	240	47.39	195
Nov. 6	50.618	110	38.34	144	14.637	194	49.34	195
15	[13] 50.728	78	39.78	154	[15] 14.831	147	51.29	189
25	50.806	44	41.32	156	14.978	96	53.18	179
Dez. 5	50.850	10	42.88	153	15.074	41	54.97	166
15	50.860	25	44.41	144	15.115	14	56.63	147
25	50.835	57	45.85	130	15.101	67	58.10	124
35	50.778		47.15		15.034		59.34	
Mittl. Ort	46.369		62.80		8.716		29.71	
sec δ, tg δ	1.014		−0.171		1.482		+1.094	
a, *a'*	+2.9		+12.2		+4.3		+11.6	
b, *b'*	−0.01		− 0.79		+0.04		− 0.81	

[1]) Die jährliche Parallaxe (0.″32) ist bereits berücksichtigt.

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Tag	134) ν Persei				138) 5 H. Camelop.				141) β Reticuli				139) η Tauri			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$3^h 40^m$		$+42° 22'$		$3^h 43^m$		$+71° 7'$		$3^h 43^m$		$-65° 0'$		$3^h 43^m$		$+23° 53'$	
Jan. 0	39.605	81	22.82	88	18.05	30	62.59	205	24.24	38	68.98	202	31.230	53	69.87	8
10	39.524	125	23.70	62	17.75	39	64.64	162	23.86	43	71.00	150	31.177	88	69.95	3
20	39.399	164	24.32	34	17.36	48	66.26	113	23.43	47	72.50	95	31.089	121	69.92	13
30	39.235	192	24.66	3	16.88	53	67.39	60	22.96	51	73.45	37	30.968	144	69.79	25
Feb. 9	39.043	210	24.69	27	16.35	57	67.99	5	22.45	52	73.82	20	30.824	160	69.54	36
19	38.833	215	24.42	57	15.78	57	68.04	49	21.93	52	73.62	77	30.664	167	69.18	45
März 1	38.618	207	23.85	83	15.21	54	67.55	101	21.41	50	72.85	131	30.497	162	68.73	53
11	38.411	186	23.02	105	14.67	50	66.54	148	20.91	46	71.54	181	30.335	146	68.20	58
21	38.225	153	21.97	123	14.17	42	65.06	188	20.45	42	69.73	226	30.189	120	67.62	59
31	38.072	109	20.74	135	13.75	32	63.18	219	20.03	36	67.47	267	30.069	86	67.03	57
Apr. 10	37.963	57	19.39	139	13.43	20	60.99	242	19.67	29	64.80	300	29.983	44	66.46	51
20	37.906	0	18.00	138	13.23	8	58.57	255	19.38	21	61.80	327	29.939	2	65.95	40
30	37.906	62	16.62	130	13.15	5	56.02	258	19.17	12	58.53	348	29.941	53	65.55	27
Mai 10	37.968	122	15.32	117	13.20	18	53.44	251	19.05	2	55.05	360	29.994	102	65.28	11
20	38.090	181	14.15	98	13.38	31	50.93	237	19.03	6	51.45	363	30.096	151	65.17	7
30	38.271	236	13.17	76	13.69	43	48.56	214	19.09	15	47.82	360	30.247	197	65.24	26
Juni 9	38.507	285	12.41	52	14.12	53	46.42	186	19.24	24	44.22	346	30.444	236	65.50	45
19	38.792	325	11.89	26	14.65	62	44.56	152	19.48	32	40.76	324	30.680	271	65.95	63
29	39.117	359	11.63	1	15.27	71	43.04	114	19.80	40	37.52	293	30.951	299	66.58	78
Juli 9	39.476	384	11.64	28	15.98	76	41.90	73	20.20	45	34.59	254	31.250	319	67.36	93
19	39.860	399	11.92	53	16.74	80	41.17	32	20.65	50	32.05	208	31.569	332	68.29	103
29	40.259	408	12.45	76	17.54	84	40.85	11	21.15	53	29.97	156	31.901	339	69.32	111
Aug. 8	40.667	408	13.21	98	18.38	84	40.96	53	21.68	55	28.41	98	32.240	339	70.43	115
18	41.075	401	14.19	116	19.22	84	41.49	93	22.23	56	27.43	36	32.579	333	71.58	115
28	41.476	389	15.35	131	20.06	82	42.42	133	22.79	54	27.07	27	32.912	323	72.73	113
Sept. 7	41.865	372	16.66	144	20.88	78	43.75	168	23.33	52	27.34	89	33.235	308	73.86	108
17	42.237	349	18.10	154	21.66	74	45.43	201	23.85	47	28.23	149	33.543	289	74.94	100
27	42.586	324	19.64	161	22.40	68	47.44	231	24.32	42	29.72	204	33.832	269	75.94	91
Okt. 7	42.910	295	21.25	165	23.08	62	49.75	256	24.74	35	31.76	253	34.101	245	76.85	83
17	43.205	261	22.90	168	23.70	54	52.31	275	25.09	28	34.29	290	34.346	218	77.68	73
27	43.466	226	24.58	167	24.24	44	55.06	291	25.37	19	37.19	319	34.564	190	78.41	63
Nov. 6	43.692	185	26.25	165	24.68	35	57.97	299	25.56	10	40.38	335	34.754	159	79.04	54
16	43.877	143	27.90	159	25.03	24	60.96	300	25.66	0	43.73	338	34.913	125	79.58	45
25	[16]44.020	96	29.49	150	[17]25.27	12	63.96	295	[17]25.66	8	47.11	328	[17]35.038	89	80.03	38
Dez. 5	44.116	47	30.99	137	25.39	0	66.91	280	25.58	18	50.39	308	35.127	50	80.41	29
15	44.163	3	32.36	121	25.39	11	69.71	257	25.40	26	53.47	275	35.177	10	80.70	21
25	44.160	52	33.57	100	25.28	23	72.28	226	25.14	33	56.22	234	35.187	30	80.91	12
35	44.108		34.57		25.05		74.54		24.81		58.56		35.157		81.03	
Mittl. Ort	38.080		6.29		15.13		41.74		21.16		63.71		29.858		57.45	
sec δ, tg δ	1.354		+0.912		3.092		+2.926		2.368		−2.146		1.094		+0.443	
a, *a'*	+4.1		+11.5		+6.3		+11.3		+0.7		+11.3		+3.6		+11.2	
b, *b'*	+0.03		− 0.82		+0.11		− 0.83		−0.08		− 0.83		+0.02		− 0.83	

Tag	140) τ⁶ Eridani AR.		Dekl.		143) *g* Eridani AR.		Dekl.		146) γ Hydri AR.		Dekl.		144) ζ Persei AR.		Dekl.	
1933	$3^h\,43^m$		−23° 26′		$3^h\,46^m$		−36° 23′		$3^h\,48^m$		−74° 26′		$3^h\,49^m$		+31° 41′	
Jan. 0	59.362	87	46.36	165	58.524	122	69.59	193	20.07	66	46.89	199	56.390	54	24.10	44
10	59.275	119	48.01	135	58.402	159	71.52	153	19.41	75	48.88	146	56.336	95	24.54	29
20	59.156	147	49.36	101	58.243	188	73.05	111	18.66	81	50.34	91	56.241	129	24.83	10
30	59.009	168	50.37	65	58.055	211	74.16	65	17.85	86	51.25	32	56.112	157	24.93	9
Feb. 9	58.841	182	51.02	28	57.844	225	74.81	18	16.99	87	51.57	26	55.955	174	24.84	28
19	58.659	186	51.30	10	57.619	229	74.99	29	16.12	88	51.31	83	55.781	183	24.56	46
März 1	58.473	181	51.20	47	57.390	223	74.70	74	15.24	84	50.48	135	55.598	178	24.10	62
11	58.292	167	50.73	84	57.167	207	73.96	117	14.40	79	49.13	186	55.420	162	23.48	74
21	58.125	144	49.89	117	56.960	182	72.79	158	13.61	72	47.27	231	55.258	135	22.74	84
31	57.981	112	48.72	151	56.778	148	71.21	196	12.89	63	44.96	269	55.123	99	21.90	88
Apr. 10	57.869	74	47.21	180	56.630	106	69.25	229	12.26	52	42.27	303	55.024	54	21.02	88
20	57.795	31	45.41	207	56.524	59	66.96	259	11.74	39	39.24	329	54.970	5	20.14	82
30	57.764	15	43.34	230	56.465	8	64.37	281	11.35	27	35.95	348	54.965	49	19.32	72
Mai 10	57.779	63	41.04	248	56.457	44	61.56	299	11.08	14	32.47	360	55.014	102	18.60	58
20	57.842	111	38.56	261	56.501	96	58.57	310	10.94	1	28.87	362	55.116	154	18.02	41
30	57.953	155	35.95	268	56.597	147	55.47	314	10.95	15	25.25	357	55.270	202	17.61	22
Juni 9	58.108	196	33.27	268	56.744	194	52.33	309	11.10	29	21.68	342	55.472	246	17.39	1
19	58.304	233	30.59	263	56.938	236	49.24	299	11.39	41	18.26	320	55.718	284	17.38	20
29	58.537	262	27.96	249	57.174	271	46.25	277	11.80	53	15.06	289	56.002	313	17.58	40
Juli 9	58.799	286	25.47	228	57.445	299	43.48	251	12.33	62	12.17	249	56.315	337	17.98	58
19	59.085	302	23.19	202	57.744	322	40.97	216	12.95	71	9.68	202	56.652	352	18.56	76
29	59.387	312	21.17	168	58.066	334	38.81	174	13.66	77	7.66	150	57.004	360	19.32	90
Aug. 8	59.699	315	19.49	130	58.400	340	37.07	127	14.43	81	6.16	91	57.364	361	20.22	101
18	60.014	311	18.19	87	58.740	338	35.80	76	15.24	83	5.25	30	57.725	356	21.23	109
28	60.325	301	17.32	41	59.078	329	35.04	22	16.07	81	4.95	33	58.081	347	22.32	114
Sept. 7	60.626	286	16.91	6	59.407	313	34.82	34	16.88	77	5.28	95	58.428	332	23.46	118
17	60.912	267	16.97	53	59.720	291	35.16	87	17.65	71	6.23	156	58.760	314	24.64	118
27	61.179	244	17.50	97	60.011	264	36.03	137	18.36	63	7.79	210	59.074	293	25.82	116
Okt. 7	61.423	217	18.47	137	60.275	233	37.40	183	18.99	52	9.89	257	59.367	268	26.98	113
17	61.640	187	19.84	172	60.508	197	39.23	221	19.51	39	12.46	295	59.635	241	28.11	109
27	61.827	155	21.56	199	60.705	159	41.44	251	19.90	25	15.41	322	59.876	211	29.20	104
Nov. 6	61.982	121	23.55	218	60.864	117	43.95	271	20.15	11	18.63	337	60.087	177	30.24	99
16	62.103	85	25.73	227	60.981	75	46.66	280	20.26	4	22.00	340	60.264	141	31.23	92
25	62.188	47	28.00	229	61.056	30	49.46	278	20.22	20	25.40	329	60.405	101	32.15	84
Dez. 5	62.235	8	30.29	222	61.086	15	52.24	267	20.02	34	28.69	307	60.506	59	32.99	75
15	62.243	29	32.51	206	61.071	58	54.91	246	19.68	48	31.76	274	60.565	15	33.74	65
25	62.214	66	34.57	184	61.013	100	57.37	216	19.20	59	34.50	232	60.580	30	34.39	51
35	62.148		36.41		60.913		59.53		18.61		36.82		60.550		34.90	
Mittl. Ort	57.842		47.54		56.791		68.34		15.36		41.40		54.929		10.06	
sec δ, tg δ	1.090		−0.434		1.242		−0.737		3.729		−3.592		1.175		+0.617	
a, *a′*	+2.6		+11.2		+2.2		+11.0		−1.0		+10.9		+3.8		+10.8	
b, *b′*	−0.02		−0.83		−0.03		−0.84		−0.13		−0.84		+0.02		−0.84	

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Tag	145) 9 H. Camelop. AR.		145) Dekl.		147) ε Persei AR.		147) Dekl.		148) ξ Persei AR.		148) Dekl.		149) γ Eridani AR.		149) Dekl.	
1933	$3^h 51^m$		$+60° 54'$		$3^h 53^m$		$+39° 49'$		$3^h 54^m$		$+35° 35'$		$3^h 54^m$		$-13° 41'$	
Jan. 0	26.69	15	71.55	173	22.659	63	20.14	83	38.275	55	74.07	64	55.601	62	49.42	142
10	26.54	22	73.28	137	22.596	109	20.97	60	38.220	98	74.71	45	55.539	95	50.84	121
20	26.32	28	74.65	95	22.487	147	21.57	36	38.122	136	75.16	24	55.444	124	52.05	95
30	26.04	33	75.60	49	22.340	179	21.93	9	37.986	165	75.40	1	55.320	147	53.00	67
Feb. 9	25.71	35	76.09	2	22.161	198	22.02	19	37.821	184	75.41	21	55.173	162	53.67	39
19	25.36	36	76.11	44	21.963	207	21.83	46	37.637	193	75.20	44	55.011	170	54.06	9
März 1	25.00	34	75.67	88	21.756	203	21.37	70	37.444	190	74.76	64	54.841	167	54.15	21
11	24.66	32	74.79	129	21.553	185	20.67	91	37.254	174	74.12	81	54.674	156	53.94	50
21	24.34	27	73.50	162	21.368	155	19.76	107	37.080	146	73.31	94	54.518	134	53.44	78
31	24.07	21	71.88	189	21.213	116	18.69	119	36.934	108	72.37	102	54.384	105	52.66	107
Apr. 10	23.86	13	69.99	207	21.097	67	17.50	124	36.826	63	71.35	105	54.279	69	51.59	134
20	23.73	4	67.92	217	21.030	12	16.26	124	36.763	11	70.30	102	54.210	28	50.25	158
30	23.69	4	65.75	219	21.018	46	15.02	116	36.752	44	69.28	94	54.182	16	48.67	181
Mai 10	23.73	13	63.56	211	21.064	105	13.86	106	36.796	100	68.34	81	54.198	62	46.86	199
20	23.86	22	61.45	197	21.169	162	12.80	89	36.896	154	67.53	66	54.260	108	44.87	215
30	24.08	30	59.48	176	21.331	215	11.91	69	37.050	205	66.87	46	54.368	151	42.72	225
Juni 9	24.38	38	57.72	151	21.546	264	11.22	47	37.255	251	66.41	25	54.519	190	40.47	230
19	24.76	44	56.21	119	21.810	305	10.75	24	37.506	291	66.16	3	54.709	225	38.17	229
29	25.20	49	55.02	86	22.115	339	10.51	1	37.797	322	66.13	18	54.934	253	35.88	223
Juli 9	25.69	53	54.16	51	22.454	364	10.52	25	38.119	347	66.31	40	55.187	277	33.65	209
19	26.22	56	53.65	15	22.818	383	10.77	47	38.466	364	66.71	59	55.464	292	31.56	190
29	26.78	58	53.50	22	23.201	392	11.24	68	38.830	373	67.30	77	55.756	302	29.66	164
Aug. 8	27.36	59	53.72	57	23.593	395	11.92	86	39.203	376	68.07	91	56.058	306	28.02	134
18	27.95	58	54.29	90	23.988	390	12.78	103	39.579	372	68.98	103	56.364	303	26.68	100
28	28.53	57	55.19	122	24.378	381	13.81	116	39.951	363	70.01	113	56.667	295	25.68	61
Sept. 7	29.10	55	56.41	152	24.759	367	14.97	126	40.314	349	71.14	119	56.962	282	25.07	20
17	29.65	52	57.93	178	25.126	347	16.23	135	40.663	330	72.33	123	57.244	267	24.87	19
27	30.17	48	59.71	200	25.473	324	17.58	141	40.993	309	73.56	126	57.511	246	25.06	59
Okt. 7	30.65	45	61.71	220	25.797	298	18.99	145	41.302	284	74.82	126	57.757	223	25.65	94
17	31.10	39	63.91	236	26.095	268	20.44	146	41.586	256	76.08	126	57.980	197	26.59	126
27	31.49	33	66.27	247	26.363	234	21.90	146	41.842	225	77.34	123	58.177	168	27.85	152
Nov. 6	31.82	27	68.74	253	26.597	198	23.36	144	42.067	190	78.57	119	58.345	138	29.37	170
16	32.09	21	71.27	254	26.795	156	24.80	140	42.257	151	79.76	114	58.483	105	31.07	182
25	[19] 32.30	13	73.81	248	[19] 26.951	111	26.20	133	[20] 42.408	110	80.90	108	[20] 58.588	70	32.89	187
Dez. 5	32.43	5	76.29	236	27.062	64	27.53	122	42.518	65	81.98	98	58.658	33	34.76	182
15	32.48	3	78.65	217	27.126	14	28.75	110	42.583	18	82.96	87	58.691	4	36.58	173
25	32.45	10	80.82	190	27.140	35	29.85	93	42.601	28	83.83	72	58.687	41	38.31	158
35	32.35		82.72		27.105		30.78		42.573		84.55		58.646		39.89	
Mittl. Ort	24.50		52.33		21.078		4.53		36.743		59.34		54.135		53.06	
sec δ, tg δ	2.057		+1.798		1.302		+0.834		1.230		+0.716		1.029		−0.244	
a, *a'*	+5.1		+10.7		+4.0		+10.5		+3.9		+10.4		+2.8		+10.4	
b, *b'*	+0.06		−0.85		+0.03		−0.85		+0.02		−0.85		−0.01		−0.85	

Obere Kulmination Greenwich

Tag	150) λ Tauri AR.		150) λ Tauri Dekl.		151) ν Tauri AR.		151) ν Tauri Dekl.	
1933	$3^h 56^m$		+12° 18′		$3^h 59^m$		+5° 48′	
Jan. 0	59.317	40	17.94	42	36.811	40	24.58	70
10	59.277	75	17.52	41	36.771	75	23.88	64
20	59.202	107	17.11	40	36.696	106	23.24	56
30	59.095	132	16.71	39	36.590	131	22.68	48
Feb. 9	58.963	150	16.32	36	36.459	148	22.20	39
19	58.813	157	15.96	33	36.311	156	21.81	28
März 1	58.656	156	15.63	28	36.155	155	21.53	17
11	58.500	144	15.35	23	36.000	145	21.36	5
21	58.356	122	15.12	14	35.855	123	21.31	8
31	58.234	92	14.98	5	35.732	94	21.39	24
Apr. 10	58.142	54	14.93	8	35.638	58	21.63	40
20	58.088	12	15.01	23	35.580	16	22.03	57
30	58.076	34	15.24	38	35.564	28	22.60	75
Mai 10	58.110	81	15.62	55	35.592	73	23.35	92
20	58.191	127	16.17	72	35.665	119	24.27	109
30	58.318	170	16.89	87	35.784	161	25.36	123
Juni 9	58.488	209	17.76	101	35.945	200	26.59	135
19	58.697	243	18.77	113	36.145	234	27.94	144
29	58.940	270	19.90	122	36.379	261	29.38	148
Juli 9	59.210	291	21.12	127	36.640	283	30.86	149
19	59.501	307	22.39	128	36.923	298	32.35	145
29	59.808	314	23.67	124	37.221	306	33.80	135
Aug. 8	60.122	317	24.91	118	37.527	309	35.15	123
18	60.439	313	26.09	107	37.836	306	36.38	106
28	60.752	305	27.16	93	38.142	299	37.44	85
Sept. 7	61.057	294	28.09	76	38.441	288	38.29	62
17	61.351	278	28.85	58	38.729	272	38.91	38
27	61.629	259	29.43	40	39.001	254	39.29	15
Okt. 7	61.888	238	29.83	22	39.255	234	39.44	9
17	62.126	214	30.05	5	39.489	210	39.35	30
27	62.340	189	30.10	10	39.699	185	39.05	47
Nov. 6	62.529	160	30.00	21	39.884	156	38.58	62
16	62.689	128	29.79	32	40.040	125	37.96	72
25	[20] 62.817	94	29.47	38	[21] 40.165	92	37.24	78
Dez. 5	62.911	58	29.09	41	40.257	56	36.46	80
15	62.969	20	28.68	44	40.313	19	35.66	80
25	62.989	18	28.24	45	40.332	19	34.86	76
35	62.971		27.79		40.313		34.10	
Mittl. Ort	57.916		8.35		35.401		16.48	
sec δ, tg δ	1.024		+0.218		1.005		+0.102	
a, *a′*	+3.3		+10.3		+3.2		+10.1	
b, *b′*	+0.01		— 0.86		0.00		— 0.87	

Tag	152) c Persei AR.		152) c Persei Dekl.		154) o^1 Eridani AR.		154) o^1 Eridani Dekl.	
1933	$4^h 3^m$		+47° 32′		$4^h 8^m$		−7° 0′	
Jan. 0	49.207	71	23.85	123	37.097	44	34.69	125
10	49.136	124	25.08	96	37.053	79	35.94	107
20	49.012	170	26.04	67	36.974	110	37.01	88
30	48.842	207	26.71	33	36.864	136	37.89	67
Feb. 9	48.635	232	27.04	1	36.728	154	38.56	44
19	48.403	243	27.03	35	36.574	164	39.00	21
März 1	48.160	241	26.68	68	36.410	164	39.21	3
11	47.919	222	26.00	97	36.246	154	39.18	27
21	47.697	191	25.03	122	36.092	135	38.91	52
31	47.506	147	23.81	140	35.957	108	38.39	75
Apr. 10	47.359	93	22.41	152	35.849	73	37.64	98
20	47.266	33	20.89	158	35.776	33	36.66	121
30	47.233	32	19.31	157	35.743	10	35.45	143
Mai 10	47.265	98	17.74	148	35.753	55	34.02	160
20	47.363	162	16.26	135	35.808	100	32.42	177
30	47.525	223	14.91	116	35.908	143	30.65	190
Juni 9	47.748	279	13.75	95	36.051	182	28.75	197
19	48.027	327	12.80	70	36.233	217	26.78	200
29	48.354	367	12.10	43	36.450	246	24.78	198
Juli 9	48.721	398	11.67	16	36.696	269	22.80	190
19	49.119	421	11.51	11	36.965	286	20.90	176
29	49.540	435	11.62	37	37.251	297	19.14	156
Aug. 8	49.975	440	11.99	63	37.548	302	17.58	132
18	50.415	440	12.62	85	37.850	301	16.26	104
28	50.855	431	13.47	106	38.151	296	15.22	71
Sept. 7	51.286	417	14.53	124	38.447	285	14.51	36
17	51.703	398	15.77	139	38.732	271	14.15	1
27	52.101	374	17.16	153	39.003	254	14.14	34
Okt. 7	52.475	345	18.69	164	39.257	234	14.48	66
17	52.820	313	20.33	172	39.491	210	15.14	95
27	53.133	275	22.05	178	39.701	184	16.09	119
Nov. 6	53.408	232	23.83	181	39.885	155	17.28	138
16	53.640	186	25.64	180	40.040	123	18.66	149
25	[22] 53.826	134	27.44	176	[23] 40.163	90	20.15	155
Dez. 5	53.960	78	29.20	166	40.253	53	21.70	154
15	54.038	21	30.86	153	40.306	15	23.24	148
25	54.059	37	32.39	135	40.321	22	24.72	136
35	54.022		33.74		40.299		26.08	
Mittl. Ort	47.394		7.24		35.624		40.05	
sec δ, tg δ	1.481		+1.093		1.008		−0.123	
a, *a′*	+4.3		+9.7		+2.9		+9.4	
b, *b′*	+0.04		−0.87		0.00		−0.88	

Tag	155) α Horologii				156) α Reticuli				160) υ⁴ Eridani				162) δ Tauri			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	4h 11m		−42° 26′		4h 13m		−62° 37′		4h 15m		−33° 57′		4h 19m		+17° 23′	
Jan. 0	48.684	129	93.03	226	36.33	29	91.25	240	23.180	93	39.38	213	5.602	23	22.83	18
10	48.555	173	95.29	186	36.04	36	93.65	193	23.087	133	41.51	177	5.579	63	22.65	21
20	48.382	208	97.15	140	35.68	42	95.58	141	22.954	168	43.28	138	5.516	98	22.44	23
30	48.174	238	98.55	93	35.26	45	96.99	85	22.786	196	44.66	94	5.418	128	22.21	25
Feb. 9	47.936	257	99.48	42	34.81	48	97.84	29	22.590	215	45.60	49	5.290	150	21.96	27
19	47.679	266	99.90	8	34.33	48	98.13	28	22.375	225	46.09	4	5.140	163	21.69	30
März 1	47.413	264	99.82	57	33.85	48	97.85	83	22.150	225	46.13	41	4.977	164	21.39	31
11	47.149	251	99.25	104	33.37	46	97.02	135	21.925	214	45.72	84	4.813	156	21.08	30
21	46.898	228	98.21	150	32.91	42	95.67	184	21.711	194	44.88	127	4.657	136	20.78	28
31	46.670	195	96.71	190	32.49	37	93.83	228	21.517	165	43.61	165	4.521	108	20.50	23
Apr. 10	46.475	154	94.81	228	32.12	31	91.55	267	21.352	127	41.96	200	4.413	72	20.27	16
20	46.321	106	92.53	260	31.81	24	88.88	299	21.225	83	39.96	231	4.341	30	20.11	6
30	46.215	53	89.93	287	31.57	17	85.89	325	21.142	35	37.65	258	4.311	16	20.05	6
Mai 10	46.162	2	87.06	307	31.40	8	82.64	344	21.107	15	35.07	280	4.327	63	20.11	20
20	46.164	58	83.99	321	31.32	0	79.20	355	21.122	67	32.27	294	4.390	111	20.31	35
30	46.222	114	80.78	326	31.32	9	75.65	357	21.189	116	29.33	302	4.501	155	20.66	49
Juni 9	46.336	165	77.52	325	31.41	17	72.08	351	21.305	163	26.31	302	4.656	197	21.15	64
19	46.501	214	74.27	314	31.58	25	68.57	335	21.468	206	23.29	296	4.853	232	21.79	77
29	46.715	256	71.13	294	31.83	32	65.22	311	21.674	243	20.33	281	5.085	263	22.56	87
Juli 9	46.971	292	68.19	269	32.15	38	62.11	278	21.917	275	17.52	257	5.348	287	23.43	95
19	47.263	321	65.50	233	32.53	44	59.33	237	22.192	299	14.95	228	5.635	305	24.38	100
29	47.584	341	63.17	190	32.97	47	56.96	188	22.491	317	12.67	189	5.940	317	25.38	101
Aug. 8	47.925	353	61.27	142	33.44	50	55.08	133	22.808	327	10.78	146	6.257	321	26.39	98
18	48.278	358	59.85	89	33.94	51	53.75	74	23.135	330	9.32	97	6.578	322	27.37	93
28	48.636	354	58.96	32	34.45	52	53.01	11	23.465	327	8.35	45	6.900	318	28.30	84
Sept. 7	48.990	343	58.64	27	34.97	50	52.90	53	23.792	317	7.90	10	7.218	309	29.14	73
17	49.333	324	58.91	85	35.47	47	53.43	115	24.109	301	8.00	64	7.527	296	29.87	60
27	49.657	300	59.76	140	35.94	43	54.58	175	24.410	281	8.64	116	7.823	280	30.47	47
Okt. 7	49.957	268	61.16	190	36.37	37	56.33	227	24.691	254	9.80	164	8.103	262	30.94	33
17	50.225	233	63.06	233	36.74	31	58.60	273	24.945	224	11.44	206	8.365	241	31.27	21
27	50.458	191	65.39	268	37.05	24	61.33	308	25.169	189	13.50	239	8.606	215	31.48	9
Nov. 6	50.649	146	68.07	293	37.29	16	64.41	331	25.358	151	15.89	264	8.821	188	31.57	0
16	50.795	99	71.00	306	37.45	8	67.72	343	25.509	110	18.53	278	9.009	156	31.57	7
25*)	^{24}50.894	49	74.06	307	^{24}37.53	1	71.15	342	^{25}25.619	67	21.31	281	^{26}9.165	121	31.50	13
Dez. 5	50.943	3	77.13	299	37.52	9	74.57	328	25.686	22	24.12	276	9.286	83	31.37	16
15	50.940	54	80.12	279	37.43	18	77.85	304	25.708	24	26.88	259	9.369	43	31.21	19
25	50.886	102	82.91	250	37.25	26	80.89	269	25.684	68	29.47	235	9.412	1	31.02	20
35	50.784		85.41		36.99		83.58		25.616		31.82		9.413		30.82	
Mittl. Ort	46.736		92.12		33.37		88.28		21.413		39.91		4.088		12.40	
sec δ, tg δ	1.355		−0.915		2.176		−1.933		1.206		−0.674		1.048		+0.313	
a, a′	+2.0		+9.1		+0.8		+9.0		+2.3		+8.8		+3.5		+8.5	
b, b′	−0.03		−0.89		−0.06		−0.89		−0.02		−0.90		+0.01		−0.90	

*) Bei Stern 162) lies Nov. 26

Tag	164) ε Tauri AR.		164) ε Tauri Dekl.		168) α Tauri AR.		168) α Tauri Dekl.		171) α Doradus AR.		171) α Doradus Dekl.		169) ν Eridani AR.		169) ν Eridani Dekl.	
1933	$4^h\ 24^m$		$+19°\ 1'$		$4^h\ 32^m$		$+16°\ 22'$		$4^h\ 32^m$		$-55°\ 10'$		$4^h\ 32^m$		$-3°\ 28'$	
Jan. 0	43.651	18	70.61	11	5.980	12	43.83	24	35.391	190	59.04	260	59.736	23	71.16	120
10	43.633	60	70.50	13	5.968	54	43.59	25	35.201	247	61.64	217	59.713	61	72.36	105
20	43.573	96	70.37	16	5.914	91	43.34	25	34.954	295	63.81	169	59.652	96	73.41	88
30	43.477	127	70.21	20	5.823	123	43.09	25	34.659	335	65.50	117	59.556	126	74.29	69
Feb. 9	43.350	150	70.01	24	5.700	147	42.84	26	34.324	361	66.67	63	59.430	148	74.98	50
19	43.200	164	69.77	28	5.553	161	42.58	26	33.963	376	67.30	8	59.282	162	75.48	30
März 1	43.036	167	69.49	31	5.392	166	42.32	27	33.587	378	67.38	47	59.120	166	75.78	9
11	42.869	159	69.18	31	5.226	160	42.05	26	33.209	365	66.91	99	58.954	161	75.87	12
21	42.710	140	68.87	31	5.066	142	41.79	23	32.844	341	65.92	149	58.793	144	75.75	33
31	42.570	113	68.56	30	4.924	116	41.56	18	32.503	304	64.43	194	58.649	121	75.42	54
Apr. 10	42.457	77	68.26	23	4.808	82	41.38	11	32.199	256	62.49	235	58.528	88	74.88	75
20	42.380	35	68.03	14	4.726	41	41.27	1	31.943	201	60.14	271	58.440	50	74.13	96
30	42.345	12	67.89	4	4.685	4	41.26	10	31.742	139	57.43	301	58.390	9	73.17	116
Mai 10	42.357	59	67.85	9	4.689	50	41.36	23	31.603	72	54.42	324	58.381	36	72.01	134
20	42.416	106	67.94	24	4.739	97	41.59	37	31.531	2	51.18	340	58.417	80	70.67	150
30	42.522	152	68.18	38	4.836	142	41.96	50	31.529	67	47.78	347	58.497	124	69.17	164
Juni 9	42.674	193	68.56	51	4.978	184	42.46	63	31.596	135	44.31	345	58.621	163	67.53	173
19	42.867	231	69.07	65	5.162	220	43.09	76	31.731	199	40.86	336	58.784	199	65.80	178
29	43.098	261	69.72	77	5.382	252	43.85	85	31.930	258	37.50	317	58.983	230	64.02	177
Juli 9	43.359	287	70.49	85	5.634	278	44.70	91	32.188	310	34.33	289	59.213	256	62.25	174
19	43.646	305	71.34	90	5.912	296	45.61	96	32.498	353	31.44	252	59.469	275	60.51	162
29	43.951	317	72.24	93	6.208	310	46.57	95	32.851	388	28.92	208	59.744	289	58.89	147
Aug. 8	44.268	325	73.17	92	6.518	317	47.52	92	33.239	413	26.84	157	60.033	297	57.42	126
18	44.593	325	74.09	88	6.835	320	48.44	85	33.652	427	25.27	100	60.330	300	56.16	101
28	44.918	321	74.97	81	7.155	317	49.29	76	34.079	432	24.27	38	60.630	298	55.15	72
Sept. 7	45.239	313	75.78	72	7.472	310	50.05	64	34.511	424	23.89	24	60.928	292	54.43	41
17	45.552	301	76.50	60	7.782	299	50.69	50	34.935	407	24.13	86	61.220	281	54.02	8
27	45.853	287	77.10	49	8.081	286	51.19	35	35.342	379	24.99	147	61.501	268	53.94	24
Okt. 7	46.140	268	77.59	37	8.367	270	51.54	21	35.721	342	26.46	203	61.769	251	54.18	55
17	46.408	249	77.96	25	8.637	249	51.75	9	36.063	297	28.49	251	62.020	231	54.73	83
27	46.657	223	78.21	15	8.886	226	51.84	3	36.360	243	31.00	291	62.251	207	55.56	107
Nov. 6	46.880	195	78.36	7	9.112	199	51.81	12	36.603	184	33.91	319	62.458	180	56.63	124
16	47.075	164	78.43	1	9.311	168	51.69	19	36.787	119	37.10	336	62.638	150	57.87	137
26	47.239	128	78.44	4	9.479	133	51.50	24	36.906	51	40.46	341	62.788	116	59.24	143
Dez. 5	[27] 47.367	90	78.40	7	[29] 9.612	96	51.26	26	[29] 36.957	17	43.87	333	[29] 62.904	80	60.67	144
15	47.457	49	78.33	10	9.708	54	51.00	27	36.940	87	47.20	315	62.984	41	62.11	139
25	47.506	7	78.23	12	9.762	12	50.73	27	36.853	152	50.35	285	63.025	0	63.50	130
35	47.513		78.11		9.774		50.46		36.701		53.20		63.025		64.80	
Mittl. Ort	42.105		59.95		4.418		33.81		32.907		57.97		58.199		77.51	
sec δ, tg δ	1.058		+0.345		1.042		+0.294		1.751		−1.438		1.002		−0.061	
a, *a'*	+3.5		+8.1		+3.4		+7.5		+1.3		+7.5		+3.0		+7.4	
b, *b'*	+0.01		−0.91		+0.01		−0.93		−0.04		−0.93		0.00		−0.93	

Tag	172) 53 Eridani AR.		Dekl.		174) τ Tauri AR.		Dekl.		173) Grb 848 AR.		Dekl.		175) 4 Camelop. AR.		Dekl.	
1933	$4^h 35^m$		−14° 25′		$4^h 38^m$		+22° 49′		$4^h 39^m$		+75° 49′		$4^h 42^m$		+56° 38′	
Jan. 0	8.225	35	57.66	167	14.908	7	58.69	10	52.04	24	39.55	259	27.307	48	41.06	182
10	8.190	73	59.33	145	14.901	51	58.79	5	51.80	39	42.14	227	27.259	120	42.88	158
20	8.117	109	60.78	118	14.850	92	58.84	0	51.41	54	44.41	185	27.139	187	44.46	127
30	8.008	139	61.96	91	14.758	125	58.84	7	50.87	64	46.26	137	26.952	241	45.73	91
Feb. 9	7.869	160	62.87	61	14.633	151	58.77	13	50.23	73	47.63	84	26.711	283	46.64	52
19	7.709	175	63.48	31	14.482	168	58.64	21	49.50	77	48.47	28	26.428	309	47.16	11
März 1	7.534	179	63.79	0	14.314	174	58.43	29	48.73	78	48.75	29	26.119	316	47.27	31
11	7.355	173	63.79	31	14.140	167	58.14	34	47.95	75	48.46	84	25.803	306	46.96	71
21	7.182	158	63.48	61	13.973	151	57.80	38	47.20	69	47.62	134	25.497	277	46.25	107
31	7.024	134	62.87	90	13.822	124	57.42	39	46.51	59	46.28	177	25.220	234	45.18	138
Apr. 10	6.890	102	61.97	118	13.698	89	57.03	37	45.92	46	44.51	215	24.986	177	43.80	163
20	6.788	64	60.79	144	13.609	47	56.66	32	45.46	32	42.36	242	24.809	109	42.17	181
30	6.724	22	59.35	168	13.562	1	56.34	25	45.14	16	39.94	261	24.700	36	40.36	191
Mai 10	6.702	23	57.67	188	13.561	48	56.09	15	44.98	0	37.33	269	24.664	43	38.45	194
20	6.725	68	55.79	205	13.609	96	55.94	3	44.98	18	34.64	270	24.707	121	36.51	191
30	6.793	112	53.74	218	13.705	142	55.91	11	45.16	34	31.94	261	24.828	196	34.60	180
Juni 9	6.905	153	51.56	224	13.847	186	56.02	24	45.50	49	29.33	245	25.024	268	32.80	165
19	7.058	191	49.32	227	14.033	225	56.26	37	45.99	63	26.88	223	25.292	331	31.15	144
29	7.249	223	47.05	222	14.258	258	56.63	50	46.62	76	24.65	193	25.623	387	29.71	121
Juli 9	7.472	250	44.83	211	14.516	285	57.13	60	47.38	87	22.72	160	26.010	434	28.50	94
19	7.722	272	42.72	193	14.801	305	57.73	68	48.25	95	21.12	123	26.444	471	27.56	65
29	7.994	287	40.79	170	15.106	320	58.41	73	49.20	103	19.89	84	26.915	498	26.91	36
Aug. 8	8.281	296	39.09	140	15.426	329	59.14	75	50.23	107	19.05	43	27.413	517	26.55	7
18	8.577	301	37.69	106	15.755	332	59.89	74	51.30	110	18.62	2	27.930	527	26.48	23
28	8.878	300	36.63	68	16.087	330	60.63	72	52.40	111	18.60	41	28.457	528	26.71	51
Sept. 7	9.178	293	35.95	26	16.417	325	61.35	66	53.51	110	19.01	81	28.985	522	27.22	77
17	9.471	284	35.69	15	16.742	314	62.01	59	54.61	107	19.82	121	29.507	508	27.99	103
27	9.755	269	35.84	56	17.056	302	62.60	50	55.68	103	21.03	159	30.015	489	29.02	127
Okt. 7	10.024	251	36.40	95	17.358	285	63.10	43	56.71	96	22.62	193	30.504	461	30.29	148
17	10.275	230	37.35	130	17.643	266	63.53	35	57.67	87	24.55	225	30.965	428	31.77	168
27	10.505	205	38.65	159	17.909	242	63.88	28	58.54	78	26.80	253	31.393	386	33.45	185
Nov. 6	10.710	176	40.24	182	18.151	214	64.16	23	59.32	65	29.33	274	31.779	338	35.30	198
16	10.886	144	42.06	197	18.365	182	64.39	18	59.97	52	32.07	291	32.117	281	37.28	208
26	11.030	108	44.03	203	18.547	147	64.57	15	60.49	37	34.98	299	32.398	218	39.36	213
Dez. 5	[30] 11.138	70	46.06	203	[1] 18.694	106	64.72	14	[1] 60.86	20	37.97	300	[2] 32.616	148	41.49	212
15	11.208	31	48.09	195	18.800	64	64.86	11	61.06	3	40.97	291	32.764	74	43.61	205
25	11.239	11	50.04	181	18.864	19	64.97	8	61.09	14	43.88	273	32.838	2	45.66	191
35	11.228		51.85		18.883		65.05		60.95		46.61		32.836		47.57	
Mittl. Ort	6.636		62.12		13.277		47.66		46.97		21.78		24.815		25.23	
sec δ, tg δ	1.033		−0.257		1.085		+0.421		4.083		+3.959		1.819		+1.519	
a, *a′*	+2.8		+7.2		+3.6		+7.0		+8.0		+6.9		+5.0		+6.7	
b, *b′*	−0.01		−0.93		+0.01		−0.94		+0.09		−0.94		+0.03		−0.94	

Tag	178) 9 Camelop. AR.		178) Dekl.		180) π^5 Orionis AR.		180) Dekl.		181) ι Aurigae AR.		181) Dekl.		183) ε Aurigae AR.		183) Dekl.	
1933	$4^h\,47^m$		$+66°\,13'$		$4^h\,50^m$		$+2°\,19'$		$4^h\,52^m$		$+33°\,3'$		$4^h\,57^m$		$+43°\,43'$	
Jan. 0	25.83	8	69.98	226	47.172	4	63.51	98	39.471	4	54.31	65	11.497	0	46.78	123
10	25.75	19	72.24	200	47.168	44	62.53	87	39.475	47	54.96	56	11.497	58	48.01	108
20	25.56	28	74.24	164	47.124	83	61.66	74	39.428	93	55.52	44	11.439	112	49.09	89
30	25.28	35	75.88	122	47.041	115	60.92	61	39.335	133	55.96	30	11.327	159	49.98	66
Feb. 9	24.93	41	77.10	76	46.926	141	60.31	46	39.202	164	56.26	13	11.168	195	50.64	40
19	24.52	44	77.86	27	46.785	157	59.85	31	39.038	185	56.39	5	10.973	220	51.04	11
März 1	24.08	45	78.13	22	46.628	166	59.54	17	38.853	194	56.34	23	10.753	230	51.15	19
11	23.63	44	77.91	71	46.462	162	59.37	1	38.659	190	56.11	40	10.523	227	50.96	46
21	23.19	40	77.20	114	46.300	149	59.36	14	38.469	174	55.71	54	10.296	208	50.50	72
31	22.79	35	76.06	154	46.151	127	59.50	31	38.295	147	55.17	66	10.088	179	49.78	93
Apr. 10	22.44	27	74.52	186	46.024	97	59.81	47	38.148	110	54.51	74	9.909	137	48.85	111
20	22.17	18	72.66	210	45.927	60	60.28	65	38.038	66	53.77	78	9.772	86	47.74	122
30	21.99	8	70.56	226	45.867	19	60.93	81	37.972	16	52.99	78	9.686	31	46.52	129
Mai 10	21.91	2	68.30	235	45.848	25	61.74	98	37.956	35	52.21	73	9.655	29	45.23	130
20	21.93	12	65.95	233	45.873	69	62.72	113	37.991	89	51.48	66	9.684	90	43.93	126
30	22.05	23	63.62	226	45.942	112	63.85	126	38.080	139	50.82	55	9.774	148	42.67	117
Juni 9	22.28	32	61.36	212	46.054	152	65.11	136	38.219	188	50.27	42	9.922	204	41.50	104
19	22.60	41	59.24	190	46.206	189	66.47	143	38.407	230	49.85	27	10.126	253	40.46	88
29	23.01	49	57.34	165	46.395	221	67.90	146	38.637	268	49.58	12	10.379	298	39.58	71
Juli 9	23.50	55	55.69	136	46.616	248	69.36	145	38.905	300	49.46	2	10.677	334	38.87	52
19	24.05	61	54.33	104	46.864	269	70.81	139	39.205	324	49.48	16	11.011	365	38.35	32
29	24.66	64	53.29	70	47.133	285	72.20	128	39.529	343	49.64	28	11.376	387	38.03	12
Aug. 8	25.30	68	52.59	34	47.418	295	73.48	112	39.872	354	49.92	38	11.763	402	37.91	7
18	25.98	69	52.25	1	47.713	300	74.60	93	40.226	361	50.30	48	12.165	410	37.98	24
28	26.67	70	52.26	36	48.013	300	75.53	69	40.587	362	50.78	54	12.575	414	38.22	41
Sept. 7	27.37	70	52.62	71	48.313	298	76.22	44	40.949	358	51.32	60	12.989	411	38.63	57
17	28.07	68	53.33	105	48.611	289	76.66	16	41.307	350	51.92	63	13.400	403	39.20	71
27	28.75	65	54.38	136	48.900	279	76.82	11	41.657	339	52.55	65	13.803	391	39.91	84
Okt. 7	29.40	62	55.74	165	49.179	265	76.71	38	41.996	322	53.20	67	14.194	373	40.75	95
17	30.02	57	57.39	192	49.444	247	76.33	62	42.318	303	53.87	68	14.567	351	41.70	106
27	30.59	51	59.31	215	49.691	226	75.71	82	42.621	279	54.55	70	14.918	322	42.76	116
Nov. 6	31.10	45	61.46	235	49.917	200	74.89	98	42.900	250	55.25	72	15.240	289	43.92	125
16	31.55	37	63.81	249	50.117	172	73.91	110	43.150	215	55.97	73	15.529	249	45.17	131
26	31.92	28	66.30	257	50.289	139	72.81	115	43.365	177	56.70	73	15.778	202	46.48	135
Dez. 5	3 32.20	18	68.87	259	4 50.428	101	71.66	116	4 43.542	132	57.43	73	5 15.980	151	47.83	137
15	32.38	8	71.46	252	50.529	62	70.50	114	43.674	84	58.16	71	16.131	94	49.20	134
25	32.46	3	73.98	238	50.591	21	69.36	106	43.758	33	58.87	67	16.225	36	50.54	127
35	32.43		76.36		50.612		68.30		43.791		59.54		16.261		51.81	
Mittl. Ort	22.51		53.51		45.589		56.12		37.651		42.16		9.419		33.41	
sec δ, tg δ	2.481		+2.271		1.001		+0.041		1.193		+0.651		1.384		+0.957	
a, a'	+6.0		+6.2		+3.1		+6.0		+3.9		+5.8		+4.3		+5.4	
b, b'	+0.05		−0.95		0.00		−0.95		+0.01		−0.96		+0.02		−0.96	

Scheinbare Sternörter 1933

Tag	182) 10 Camelop.				184) ι Tauri				185) η Aurigae				186) ε Leporis			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	4h 57m		+60° 20′		4h 59m		+21° 29′		5h 1m		+41° 8′		5h 2m		−22° 27′	
Jan. 0	29.86	4	63.35	205	7.052	11	55.23	2	50.811	8	57.26	110	39.166	26	31.54	213
10	29.82	12	65.40	182	7.063	34	55.25	2	50.819	49	58.36	98	39.140	68	33.67	187
20	29.70	20	67.22	153	7.029	77	55.27	1	50.770	101	59.34	81	39.072	109	35.54	157
30	29.50	26	68.75	116	6.952	113	55.26	5	50.669	147	60.15	60	38.963	143	37.11	123
Feb. 9	29.24	31	69.91	76	6.839	144	55.21	9	50.522	183	60.75	37	38.820	170	38.34	87
19	28.93	34	70.67	32	6.695	163	55.12	14	50.339	208	61.12	11	38.650	189	39.21	50
März 1	28.59	36	70.99	13	6.532	173	54.98	19	50.131	219	61.23	15	38.461	198	39.71	12
11	28.23	36	70.86	56	6.359	172	54.79	24	49.912	217	61.08	40	38.263	197	39.83	25
21	27.87	32	70.30	97	6.187	158	54.55	28	49.695	201	60.68	64	38.066	184	39.58	61
31	27.55	28	69.33	132	6.029	135	54.27	29	49.494	173	60.04	83	37.882	164	38.97	96
Apr. 10	27.27	23	68.01	163	5.894	102	53.98	28	49.321	134	59.21	100	37.718	135	38.01	129
20	27.04	15	66.38	185	5.792	64	53.70	24	49.187	86	58.21	110	37.583	98	36.72	161
30	26.89	7	64.53	201	5.728	20	53.46	18	49.101	32	57.11	115	37.485	58	35.11	187
Mai 10	26.82	1	62.52	208	5.708	28	53.28	10	49.069	25	55.96	117	37.427	13	33.24	212
20	26.83	10	60.44	209	5.736	75	53.18	1	49.094	82	54.79	112	37.414	32	31.12	231
30	26.93	19	58.35	202	5.811	121	53.19	11	49.176	139	53.67	104	37.446	78	28.81	245
Juni 9	27.12	26	56.33	190	5.932	165	53.30	23	49.315	193	52.63	92	37.524	121	26.36	253
19	27.38	33	54.43	172	6.097	204	53.53	35	49.508	241	51.71	78	37.645	161	23.83	255
29	27.71	40	52.71	150	6.301	239	53.88	45	49.749	283	50.93	61	37.806	198	21.28	249
Juli 9	28.11	45	51.21	124	6.540	267	54.33	53	50.032	320	50.32	44	38.004	230	18.79	237
19	28.56	50	49.97	97	6.807	291	54.86	59	50.352	348	49.88	26	38.234	256	16.42	218
29	29.06	53	49.00	66	7.098	307	55.45	62	50.700	371	49.62	8	38.490	277	14.24	190
Aug. 8	29.59	56	48.34	35	7.405	320	56.07	63	51.071	386	49.54	8	38.767	291	12.34	157
18	30.15	58	47.99	4	7.725	325	56.70	61	51.457	395	49.62	24	39.058	302	10.77	119
28	30.73	58	47.95	26	8.050	328	57.31	56	51.852	398	49.86	37	39.360	305	9.58	74
Sept. 7	31.31	58	48.21	56	8.378	325	57.87	50	52.250	397	50.23	51	39.665	304	8.84	28
17	31.89	57	48.77	85	8.703	318	58.37	41	52.647	390	50.74	62	39.969	299	8.56	21
27	32.46	55	49.62	113	9.021	309	58.78	33	53.037	379	51.36	73	40.268	287	8.77	69
Okt. 7	33.01	52	50.75	139	9.330	296	59.11	24	53.416	363	52.09	83	40.555	273	9.46	114
17	33.53	49	52.14	162	9.626	278	59.35	15	53.779	342	52.92	92	40.828	253	10.60	156
27	34.02	45	53.76	184	9.904	257	59.50	9	54.121	316	53.84	100	41.081	229	12.16	191
Nov. 6	34.47	40	55.60	202	10.161	233	59.59	4	54.437	284	54.84	108	41.310	200	14.07	220
16	34.87	33	57.62	216	10.394	201	59.63	0	54.721	247	55.92	113	41.510	168	16.27	239
26	35.20	26	59.78	224	10.595	167	59.63	1	54.968	203	57.05	118	41.678	130	18.66	249
Dez. 6	35.46	18	62.02	228	10.762	128	59.62	1	55.171	153	58.23	120	41.808	89	21.15	251
15	[6] 35.64	10	64.30	224	[6] 10.890	84	59.61	1	[7] 55.324	99	59.43	118	[7] 41.897	46	23.66	244
25	35.74	2	66.54	213	10.974	39	59.60	1	55.423	43	60.61	113	41.943	1	26.10	228
35	35.76		68.67		11.013		59.59		55.466		61.74		41.944		28.38	
Mittl. Ort	26.98		48.14		5.351		45.02		48.776		44.47		37.459		35.54	
sec δ, tg δ	2.021		+1.757		1.075		+0.394		1.328		+0.874		1.082		−0.413	
a, a′	+5.3		+5.4		+3.6		+5.3		+4.2		+5.0		+2.5		+5.0	
b, b′	+0.03		−0.96		+0.01		−0.96		+0.01		−0.97		−0.01		−0.97	

Tag	188) β Eridani AR.		188) β Eridani Dekl.		192) μ Aurigae AR.		192) μ Aurigae Dekl.		194) β Orionis AR.		194) β Orionis Dekl.		191) 19 H. Camelop. AR.		191) 19 H. Camelop. Dekl.	
1933	$5^h 4^m$		$-5° 9'$		$5^h 8^m$		$+38° 24'$		$5^h 11^m$		$-8° 16'$		$5^h 11^m$		$+79° 9'$	
	s		"		s		"		s		"		s		"	
Jan. 0	34.930	0	72.00	139	52.437	18	36.97	96	20.654	3	33.99	156	35.90	19	46.61	286
10	34.930	41	73.39	124	52.455	38	37.93	87	20.657	40	35.55	139	35.71	41	49.47	260
20	34.889	81	74.63	105	52.417	89	38.80	73	20.617	79	36.94	118	35.30	61	52.07	225
30	34.808	114	75.68	84	52.328	135	39.53	56	20.538	115	38.12	95	34.69	78	54.32	179
Feb. 9	34.694	142	76.52	62	52.193	171	40.09	35	20.423	143	39.07	71	33.91	91	56.11	129
19	34.552	161	77.14	40	52.022	196	40.44	13	20.280	163	39.78	45	33.00	99	57.40	74
März 1	34.391	171	77.54	18	51.826	210	40.57	10	20.117	173	40.23	20	32.01	104	58.14	15
11	34.220	170	77.72	5	51.616	208	40.47	33	19.944	174	40.43	6	30.97	103	58.29	42
21	34.050	158	77.67	27	51.408	195	40.14	54	19.770	163	40.37	31	29.94	97	57.87	97
31	33.892	139	77.40	50	51.213	170	39.60	72	19.607	146	40.06	55	28.97	87	56.90	148
Apr. 10	33.753	111	76.90	71	51.043	132	38.88	86	19.461	117	39.51	80	28.10	74	55.42	191
20	33.642	76	76.19	93	50.911	88	38.02	96	19.344	84	38.71	104	27.36	57	53.51	227
30	33.566	36	75.26	114	50.823	37	37.06	102	19.260	44	37.67	125	26.79	37	51.24	254
Mai 10	33.530	6	74.12	132	50.786	18	36.04	101	19.216	2	36.42	145	26.42	17	48.70	272
20	33.536	50	72.80	149	50.804	73	35.03	98	19.214	40	34.97	162	26.25	5	45.98	281
30	33.586	92	71.31	161	50.877	127	34.05	90	19.254	84	33.35	176	26.30	26	43.17	281
Juni 9	33.678	134	69.70	172	51.004	179	33.15	80	19.338	125	31.59	185	26.56	46	40.36	272
19	33.812	170	67.98	177	51.183	226	32.35	66	19.463	162	29.74	191	27.02	65	37.64	256
29	33.982	205	66.21	177	51.409	268	31.69	52	19.625	197	27.83	190	27.67	84	35.08	234
Juli 9	34.187	232	64.44	173	51.677	303	31.17	36	19.822	226	25.93	185	28.51	99	32.74	205
19	34.419	256	62.71	163	51.980	331	30.81	21	20.048	250	24.08	172	29.50	113	30.69	173
29	34.675	273	61.08	146	52.311	354	30.60	6	20.298	269	22.36	155	30.63	124	28.96	136
Aug. 8	34.948	286	59.62	125	52.665	370	30.54	8	20.567	283	20.81	132	31.87	132	27.60	97
18	35.234	294	58.37	100	53.035	379	30.62	21	20.850	291	19.49	104	33.19	139	26.63	56
28	35.528	297	57.37	69	53.414	384	30.83	32	21.141	296	18.45	71	34.58	143	26.07	14
Sept. 7	35.825	295	56.68	37	53.798	383	31.15	43	21.437	296	17.74	36	36.01	143	25.93	29
17	36.120	290	56.31	3	54.181	379	31.58	52	21.733	292	17.38	1	37.44	143	26.22	72
27	36.410	281	56.28	32	54.560	368	32.10	60	22.025	283	17.39	39	38.87	138	26.94	113
Okt. 7	36.691	269	56.60	65	54.928	354	32.70	67	22.308	272	17.78	74	40.25	132	28.07	153
17	36.960	252	57.25	95	55.282	336	33.37	75	22.580	256	18.52	106	41.57	123	29.60	191
27	37.212	231	58.20	120	55.618	311	34.12	81	22.836	235	19.58	135	42.80	112	31.51	224
Nov. 6	37.443	208	59.40	141	55.929	283	34.93	88	23.071	212	20.93	157	43.92	96	33.75	255
16	37.651	178	60.81	156	56.212	246	35.81	94	23.283	182	22.50	173	44.88	80	36.30	278
26	37.829	145	62.37	163	56.458	206	36.75	98	23.465	150	24.23	182	45.68	61	39.08	296
Dez. 6	37.974	108	64.00	164	56.664	158	37.73	101	23.615	112	26.05	184	46.29	40	42.04	305
15	38.082	68	65.64	160	56.822	106	38.74	101	23.727	71	27.89	179	46.69	17	45.09	305
25	38.150	26	67.24	150	56.928	51	39.75	98	23.798	29	29.68	168	46.86	5	48.14	294
35	38.176		68.74		56.979		40.73		23.827		31.36		46.81		51.08	
Mittl. Ort	33.309		78.29		50.434		24.90		19.014		39.92		28.58		31.14	
sec δ, tg δ	1.004		−0.091		1.276		+0.793		1.011		−0.146		5.317		+5.222	
a, a'	+3.0		+4.8		+4.1		+4.4		+2.9		+4.2		+9.9		+4.2	
b, b'	0.00		−0.97		+0.01		−0.98		0.00		−0.98		+0.07		−0.98	

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Tag	193) α Aurigae				196) ϑ Doradus				201) γ Orionis				202) β Tauri			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$5^h\ 11^m$		$+45°\ 55'$		$5^h\ 13^m$		$-67°\ 15'$		$5^h\ 21^m$		$+6°\ 17'$		$5^h\ 22^m$		$+28°\ 33'$	
Jan. 0	46.409	16	67.32	136	51.78	27	37.28	304	33.863	25	32.82	85	5.175	35	19.48	41
10	46.425	46	68.68	124	51.51	37	40.32	266	33.888	19	31.97	75	5.210	17	19.89	39
20	46.379	105	69.92	105	51.14	44	42.98	222	33.869	61	31.22	65	5.193	65	20.28	34
30	46.274	156	70.97	82	50.70	51	45.20	171	33.808	99	30.57	53	5.128	107	20.62	26
Feb. 9	46.118	196	71.79	55	50.19	56	46.91	119	33.709	130	30.04	41	5.021	143	20.88	17
19	45.922	226	72.34	25	49.63	60	48.10	63	33.579	151	29.63	30	4.878	169	21.05	6
März 1	45.696	240	72.59	5	49.03	61	48.73	7	33.428	165	29.33	19	4.709	183	21.11	7
11	45.456	240	72.54	35	48.42	61	48.80	47	33.263	167	29.14	7	4.526	185	21.04	19
21	45.216	225	72.19	65	47.81	58	48.33	101	33.096	158	29.07	4	4.341	176	20.85	31
31	44.991	197	71.54	89	47.23	55	47.32	150	32.938	140	29.11	16	4.165	155	20.54	40
Apr. 10	44.794	156	70.65	110	46.68	49	45.82	196	32.798	114	29.27	29	4.010	124	20.14	47
20	44.638	107	69.55	126	46.19	42	43.86	238	32.684	80	29.56	42	3.886	86	19.67	51
30	44.531	50	68.29	136	45.77	35	41.48	274	32.604	41	29.98	55	3.800	41	19.16	52
Mai 10	44.481	10	66.93	141	45.42	26	38.74	304	32.563	1	30.53	69	3.759	6	18.64	49
20	44.491	72	65.52	139	45.16	16	35.70	325	32.564	44	31.22	82	3.765	55	18.15	44
30	44.563	133	64.13	134	45.00	7	32.45	341	32.608	87	32.04	94	3.820	104	17.71	37
Juni 9	44.696	190	62.79	124	44.93	3	29.04	346	32.695	128	32.98	104	3.924	151	17.34	27
19	44.886	244	61.55	110	44.96	13	25.58	344	32.823	167	34.02	111	4.075	194	17.07	17
29	45.130	291	60.45	94	45.09	22	22.14	331	32.990	200	35.13	115	4.269	231	16.90	7
Juli 9	45.421	331	59.51	76	45.31	32	18.83	310	33.190	229	36.28	116	4.500	264	16.83	3
19	45.752	364	58.75	56	45.63	39	15.73	279	33.419	253	37.44	112	4.764	290	16.86	11
29	46.116	390	58.19	37	46.02	46	12.94	239	33.672	272	38.56	105	5.054	312	16.97	19
Aug. 8	46.506	410	57.82	17	46.48	51	10.55	192	33.944	287	39.61	92	5.366	328	17.16	25
18	46.916	421	57.65	1	46.99	56	8.63	137	34.231	296	40.53	77	5.694	338	17.41	29
28	47.337	427	57.66	20	47.55	58	7.26	77	34.527	301	41.30	57	6.032	344	17.70	30
Sept. 7	47.764	428	57.86	37	48.13	60	6.49	14	34.828	302	41.87	36	6.376	345	18.00	30
17	48.192	422	58.23	54	48.73	59	6.35	52	35.130	300	42.23	12	6.721	342	18.30	30
27	48.614	413	58.77	70	49.32	56	6.87	116	35.430	293	42.35	12	7.063	336	18.60	28
Okt. 7	49.027	397	59.47	83	49.88	52	8.03	177	35.723	284	42.23	35	7.399	326	18.88	27
17	49.424	376	60.30	98	50.40	47	9.80	233	36.007	270	41.88	56	7.725	311	19.15	26
27	49.800	350	61.28	111	50.87	39	12.13	280	36.277	253	41.32	74	8.036	292	19.41	26
Nov. 6	50.150	315	62.39	122	51.26	31	14.93	317	36.530	231	40.58	88	8.328	267	19.67	27
16	50.465	276	63.61	132	51.57	22	18.10	344	36.761	203	39.70	98	8.595	237	19.94	29
26	50.741	228	64.93	140	51.79	11	21.54	357	36.964	172	38.72	103	8.832	202	20.23	32
Dez. 6	50.969	175	66.33	144	51.90	0	25.11	358	37.136	136	37.69	103	9.034	160	20.55	35
15	51.144	116	67.77	144	51.90	10	28.69	348	37.272	94	36.66	100	9.194	113	20.90	37
25	51.260	54	69.21	139	51.80	21	32.17	326	37.366	51	35.66	94	9.307	65	21.27	39
35	51.314		70.60		51.59		35.43		37.417		34.72		9.372		21.66	
Mittl. Ort	44.177		54.55		48.23		38.45		32.195		25.13		3.306		9.21	
sec δ, tg δ	1.438		+1.033		2.587		−2.386		1.006		+0.110		1.138		+0.544	
a, a'	+4.4		+4.2		−0.1		+4.0		+3.2		+3.3		+3.8		+3.3	
b, b'	+0.01		−0.98		−0.03		−0.98		0.00		−0.99		+0.01		−0.99	

Tag	203) 17 Camelop. AR.	Δ	Dekl.	Δ	206) δ Orionis AR.	Δ	Dekl.	Δ	207) α Leporis AR.	Δ	Dekl.	Δ	205) Grb 966 AR.	Δ	Dekl.	Δ
1933	$5^h 23^m$		+63° 0′		$5^h 28^m$		−0° 20′		$5^h 29^m$		−17° 51′		$5^h 30^m$		+75° 0′	
Jan. 0	53.51	1	63.20	226	36.623	26	43.62	124	48.176	7	63.52	209	51.00	4	24.58	277
10	53.52	9	65.46	207	36.649	18	44.86	109	48.183	39	65.61	187	50.96	21	27.35	257
20	53.43	18	67.53	181	36.631	61	45.95	94	48.144	82	67.48	161	50.75	36	29.92	227
30	53.25	26	69.34	149	36.570	98	46.89	77	48.062	119	69.09	131	50.39	49	32.19	189
Feb. 9	52.99	32	70.83	109	36.472	129	47.66	59	47.943	151	70.40	99	49.90	61	34.08	143
19	52.67	37	71.92	65	36.343	153	48.25	41	47.792	173	71.39	66	49.29	68	35.51	91
März 1	52.30	39	72.57	20	36.190	166	48.66	23	47.619	187	72.05	32	48.61	73	36.42	38
11	51.91	40	72.77	26	36.024	169	48.89	4	47.432	190	72.37	3	47.88	74	36.80	18
21	51.51	38	72.51	71	35.855	162	48.93	13	47.242	184	72.34	36	47.14	71	36.62	71
31	51.13	33	71.80	111	35.693	146	48.80	31	47.058	167	71.98	68	46.43	65	35.91	121
Apr. 10	50.80	28	70.69	147	35.547	120	48.49	49	46.891	141	71.30	99	45.78	55	34.70	165
20	50.52	22	69.22	177	35.427	88	48.00	67	46.750	109	70.31	128	45.23	44	33.05	203
30	50.30	13	67.45	198	35.339	50	47.33	84	46.641	72	69.03	155	44.79	31	31.02	232
Mai 10	50.17	4	65.47	213	35.289	9	46.49	101	46.569	30	67.48	179	44.48	16	28.70	253
20	50.13	4	63.34	220	35.280	33	45.48	116	46.539	13	65.69	200	44.32	1	26.17	265
30	50.17	14	61.14	220	35.313	75	44.32	128	46.552	57	63.69	214	44.31	15	23.52	270
Juni 9	50.31	23	58.94	214	35.388	116	43.04	139	46.609	99	61.55	226	44.46	30	20.82	265
19	50.54	31	56.80	201	35.504	153	41.65	144	46.708	138	59.29	230	44.76	44	18.17	254
29	50.85	38	54.79	183	35.657	188	40.21	148	46.846	175	56.99	229	45.20	58	15.63	236
Juli 9	51.23	45	52.96	161	35.845	218	38.73	145	47.021	208	54.70	220	45.78	69	13.27	212
19	51.68	50	51.35	136	36.063	243	37.28	138	47.229	235	52.50	205	46.47	80	11.15	185
29	52.18	55	49.99	108	36.306	262	35.90	126	47.464	258	50.45	183	47.27	89	9.30	152
Aug. 8	52.73	58	48.91	79	36.568	278	34.64	109	47.722	275	48.62	154	48.16	96	7.78	117
18	53.31	61	48.12	47	36.846	289	33.55	89	47.997	289	47.08	120	49.12	101	6.61	80
28	53.92	62	47.65	16	37.135	295	32.66	62	48.286	296	45.88	81	50.13	105	5.81	41
Sept. 7	54.54	63	47.49	16	37.430	297	32.04	35	48.582	300	45.07	38	51.18	106	5.40	1
17	55.17	63	47.65	47	37.727	296	31.69	6	48.882	299	44.69	7	52.24	106	5.39	39
27	55.80	62	48.12	78	38.023	291	31.63	26	49.181	293	44.76	53	53.30	105	5.78	79
Okt. 7	56.42	60	48.90	108	38.314	282	31.89	55	49.474	283	45.29	96	54.35	101	6.57	117
17	57.02	56	49.98	136	38.596	269	32.44	81	49.757	269	46.25	137	55.36	95	7.74	154
27	57.58	52	51.34	163	38.865	252	33.25	105	50.026	249	47.62	172	56.31	88	9.28	190
Nov. 6	58.10	47	52.97	187	39.117	230	34.30	123	50.275	224	49.34	201	57.19	79	11.18	220
16	58.57	41	54.84	207	39.347	204	35.53	137	50.499	195	51.35	222	57.98	67	13.38	247
26	58.98	33	56.91	222	39.551	173	36.90	143	50.694	161	53.57	234	58.65	54	15.85	268
Dez. 6	59.31	25	59.13	232	39.724	136	38.33	145	50.855	122	55.91	239	59.19	39	18.53	281
15	59.56	16	61.45	235	39.860	95	39.78	141	50.977	78	58.30	234	59.58	23	21.34	287
25	59.72	6	63.80	230	39.955	53	41.19	133	51.055	34	60.64	222	59.81	6	24.21	281
35	59.78		66.10		40.008		42.52		51.089		62.86		59.87		27.02	
Mittl. Ort	50.16		49.76		34.957		50.51		46.470		68.69		45.26		10.98	
sec δ, tg δ	2.204		+1.964		1.000		−0.006		1.051		−0.322		3.865		+3.733	
a, *a′*	+5.7		+3.1		+3.1		+2.7		+2.6		+2.6		+8.0		+2.5	
b, *b′*	+0.02		−0.99		0.00		−0.99		0.00		−0.99		+0.03		−0.99	

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Tag	209) ι Orionis AR.		209) ι Orionis Dekl.		210) ε Orionis AR.		210) ε Orionis Dekl.		212) β Doradus AR.		212) β Doradus Dekl.		211) ζ Tauri AR.		211) ζ Tauri Dekl.	
1933	5h 32m		−5° 56′		5h 32m		−1° 14′		5h 32m		−62° 31′		5h 33m		+21° 6′	
	s		″		s		″		s		″		s		″	
Jan. 0	10.983	23	63.19	154	50.445	28	29.37	129	65.48	17	57.82	322	40.183	44	20.69	3
10	11.006	20	64.73	138	50.473	15	30.66	116	65.31	25	61.04	287	40.227	5	20.66	0
20	10.986	63	66.11	118	50.458	58	31.82	98	65.06	32	63.91	247	40.222	51	20.66	2
30	10.923	102	67.29	96	50.400	97	32.80	81	64.74	39	66.38	200	40.171	94	20.68	2
Feb. 9	10.821	132	68.25	74	50.303	128	33.61	62	64.35	44	68.38	148	40.077	129	20.70	0
19	10.689	156	68.99	51	50.175	152	34.23	44	63.91	48	69.86	95	39.948	154	20.70	3
März 1	10.533	169	69.50	27	50.023	166	34.67	24	63.43	50	70.81	40	39.794	171	20.67	7
11	10.364	174	69.77	3	49.857	170	34.91	5	62.93	50	71.21	15	39.623	175	20.60	11
21	10.190	167	69.80	20	49.687	163	34.96	13	62.43	49	71.06	69	39.448	168	20.49	15
31	10.023	151	69.60	42	49.524	148	34.83	32	61.94	46	70.37	120	39.280	151	20.34	17
Apr. 10	9.872	126	69.18	65	49.376	123	34.51	51	61.48	42	69.17	168	39.129	124	20.17	19
20	9.746	95	68.53	87	49.253	91	34.00	69	61.06	36	67.49	213	39.005	89	19.98	18
30	9.651	58	67.66	107	49.162	54	33.31	87	60.70	30	65.36	250	38.916	48	19.80	15
Mai 10	9.593	17	66.59	126	49.108	14	32.44	104	60.40	23	62.86	284	38.868	4	19.65	9
20	9.576	24	65.33	143	49.094	28	31.40	119	60.17	16	60.02	311	38.864	42	19.56	3
30	9.600	67	63.90	156	49.122	71	30.21	132	60.01	7	56.91	329	38.906	87	19.53	5
Juni 9	9.667	108	62.34	167	49.193	111	28.89	142	59.94	1	53.62	339	38.993	131	19.58	13
19	9.775	146	60.67	173	49.304	150	27.47	148	59.95	10	50.23	342	39.124	171	19.71	22
29	9.921	181	58.94	174	49.454	183	25.99	150	60.05	17	46.81	334	39.295	208	19.93	29
Juli 9	10.102	210	57.20	170	49.637	214	24.49	148	60.22	25	43.47	317	39.503	240	20.22	35
19	10.312	237	55.50	161	49.851	239	23.01	141	60.47	31	40.30	290	39.743	265	20.57	39
29	10.549	258	53.89	145	50.090	260	21.60	129	60.78	38	37.40	254	40.008	288	20.96	41
Aug. 8	10.807	273	52.44	124	50.350	275	20.31	111	61.16	42	34.86	210	40.296	303	21.37	40
18	11.080	286	51.20	99	50.625	287	19.20	89	61.58	47	32.76	159	40.599	315	21.77	37
28	11.366	292	50.21	69	50.912	293	18.31	63	62.05	50	31.17	100	40.914	322	22.14	31
Sept. 7	11.658	296	49.52	36	51.205	297	17.68	34	62.55	51	30.17	38	41.236	325	22.45	25
17	11.954	294	49.16	1	51.502	296	17.34	4	63.06	51	29.79	28	41.561	324	22.70	16
27	12.248	290	49.15	35	51.798	291	17.30	28	63.57	50	30.07	92	41.885	320	22.86	7
Okt. 7	12.538	282	49.50	69	52.089	284	17.58	57	64.07	47	30.99	156	42.205	311	22.93	2
17	12.820	269	50.19	101	52.373	271	18.15	86	64.54	43	32.55	214	42.516	300	22.91	9
27	13.089	251	51.20	128	52.644	254	19.01	109	64.97	38	34.69	264	42.816	283	22.82	15
Nov. 6	13.340	230	52.48	150	52.898	233	20.10	129	65.35	31	37.33	306	43.099	262	22.67	18
16	13.570	203	53.98	166	53.131	207	21.39	142	65.66	24	40.39	338	43.361	234	22.49	20
26	13.773	171	55.64	175	53.338	176	22.81	150	65.90	15	43.77	356	43.595	201	22.29	19
Dez. 6	13.944	134	57.39	178	53.514	139	24.31	152	66.05	7	47.33	362	43.796	163	22.10	16
15	[14] 14.078	94	59.17	174	[15] 53.653	99	25.83	148	[15] 66.12	2	50.95	357	[15] 43.959	120	21.94	12
25	14.172	50	60.91	165	53.752	55	27.31	139	66.10	12	54.52	340	44.079	72	21.82	9
35	14.222		62.56		53.807		28.70		65.98		57.92		44.151		21.73	
Mittl. Ort	9.313		69.51		48.773		36.15		62.46		60.50		38.377		11.69	
sec δ, tg δ	1.005		−0.104		1.000		−0.022		2.168		−1.924		1.072		+0.386	
a, *a′*	+2.9		+2.4		+3.0		+2.4		+0.5		+2.4		+3.6		+2.3	
b, *b′*	0.00		−0.99		0.00		−0.99		−0.02		−0.99		0.00		−0.99	

Tag	215) α Columbae AR.		Dekl.		216) ο Aurigae AR.		Dekl.		219) ζ Leporis AR.		Dekl.		220) κ Orionis AR.		Dekl.	
1933	$5^h\ 37^m$		$-34°\ 6'$		$5^h\ 40^m$		$+49°\ 47'$		$5^h\ 43^m$		$-14°\ 50'$		$5^h\ 44^m$		$-9°\ 41'$	
Jan. 0	15.184	18	28.27	274	45.052	53	67.54	163	56.844	24	38.84	202	36.396	31	25.69	177
10	15.166	68	31.01	248	45.105	17	69.17	153	56.868	23	40.86	183	36.427	15	27.46	160
20	15.098	117	33.49	214	45.088	85	70.70	137	56.845	66	42.69	158	36.412	59	29.06	138
30	14.981	158	35.63	175	45.003	145	72.07	117	56.779	105	44.27	131	36.353	97	30.44	114
Feb. 9	14.823	193	37.38	133	44.858	196	73.24	90	56.674	139	45.58	100	36.256	131	31.58	89
19	14.630	218	38.71	90	44.662	234	74.14	60	56.535	165	46.58	70	36.125	157	32.47	62
März 1	14.412	233	39.61	44	44.428	258	74.74	26	56.370	179	47.28	39	35.968	172	33.09	35
11	14.179	238	40.05	1	44.170	265	75.00	8	56.191	186	47.67	8	35.796	178	33.44	8
21	13.941	232	40.04	46	43.905	257	74.92	41	56.005	180	47.75	24	35.618	173	33.52	19
31	13.709	214	39.58	89	43.648	233	74.51	72	55.825	167	47.51	54	35.445	159	33.33	45
Apr. 10	13.495	189	38.69	129	43.415	197	73.79	99	55.658	143	46.97	83	35.286	137	32.88	70
20	13.306	155	37.40	168	43.218	149	72.80	122	55.515	113	46.14	111	35.149	106	32.18	95
30	13.151	115	35.72	201	43.069	93	71.58	140	55.402	78	45.03	137	35.043	71	31.23	117
Mai 10	13.036	71	33.71	231	42.976	32	70.18	151	55.324	37	43.66	160	34.972	31	30.06	138
20	12.965	23	31.40	256	42.944	33	68.67	157	55.287	5	42.06	179	34.941	10	28.68	156
30	12.942	25	28.84	273	42.977	97	67.10	158	55.292	47	40.27	196	34.951	52	27.12	171
Juni 9	12.967	73	26.11	286	43.074	159	65.52	153	55.339	88	38.31	206	35.003	93	25.41	182
19	13.040	118	23.25	289	43.233	218	63.99	145	55.427	128	36.25	213	35.096	132	23.59	187
29	13.158	162	20.36	286	43.451	271	62.54	132	55.555	164	34.12	213	35.228	167	21.72	189
Juli 9	13.320	200	17.50	274	43.722	319	61.22	117	55.719	196	31.99	206	35.395	198	19.83	184
19	13.520	235	14.76	254	44.041	358	60.05	100	55.915	225	29.93	194	35.593	226	17.99	174
29	13.755	265	12.22	225	44.399	391	59.05	82	56.140	248	27.99	174	35.819	248	16.25	156
Aug. 8	14.020	287	9.97	189	44.790	418	58.23	62	56.388	267	26.25	148	36.067	267	14.69	134
18	14.307	307	8.08	145	45.208	437	57.61	41	56.655	281	24.77	117	36.334	280	13.35	106
28	14.614	318	6.63	97	45.645	450	57.20	21	56.936	291	23.60	81	36.614	289	12.29	74
Sept. 7	14.932	325	5.66	43	46.095	457	56.99	1	57.227	297	22.79	40	36.903	295	11.55	38
17	15.257	326	5.23	13	46.552	458	56.98	19	57.524	298	22.39	3	37.198	296	11.17	1
27	15.583	320	5.36	69	47.010	453	57.17	39	57.822	294	22.42	45	37.494	293	11.18	39
Okt. 7	15.903	309	6.05	123	47.463	443	57.56	58	58.116	288	22.87	87	37.787	286	11.57	78
17	16.212	291	7.28	174	47.906	426	58.14	78	58.404	275	23.74	127	38.073	275	12.35	112
27	16.503	268	9.02	220	48.332	403	58.92	97	58.679	258	25.01	161	38.348	259	13.47	144
Nov. 6	16.771	238	11.22	255	48.735	370	59.89	114	58.937	237	26.62	189	38.607	238	14.91	168
16	17.009	202	13.77	284	49.105	330	61.03	130	59.174	209	28.51	211	38.845	212	16.59	187
26	17.211	161	16.61	300	49.435	282	62.33	145	59.383	176	30.62	223	39.057	180	18.46	198
Dez. 6	17.372	115	19.61	308	49.717	226	63.78	155	59.559	138	32.85	228	39.237	143	20.44	202
16	16 17.487	65	22.69	303	17 49.943	162	65.33	161	17 59.697	97	35.13	225	18 39.380	102	22.46	199
25	17.552	13	25.72	290	50.105	95	66.94	162	59.794	51	37.38	214	39.482	58	24.45	189
35	17.565		28.62		50.200		68.56		59.845		39.52		39.540		26.34	
Mittl. Ort	13.301		32.43		42.508		56.39		55.140		44.50		34.706		31.74	
sec δ, tg δ	1.208		−0.677		1.549		+1.183		1.035		−0.265		1.014		−0.171	
a, *a'*	+2.2		+2.0		+4.6		+1.7		+2.7		+1.4		+2.8		+1.3	
b, *b'*	0.00		−1.00		+0.01		−1.00		0.00		−1.00		0.00		−1.00	

Tag	224) α Orionis AR.		Dekl.		225) δ Aurigae AR.		Dekl.		227) β Aurigae AR.		Dekl.		228) ϑ Aurigae AR.		Dekl.	
1933	$5^h 51^m$		$+7° 23'$		$5^h 54^m$		$+54° 16'$		$5^h 54^m$		$+44° 56'$		$5^h 55^m$		$+37° 12'$	
Jan. 0	^{s}34.371	53	″53.32	87	^{s}3.468	71	″65.11	186	^{s}39.261	73	″43.02	136	^{s}11.316	72	″44.06	90
10	34.424	6	52.45	76	3.539	7	66.97	178	39.334	7	44.38	131	11.388	14	44.96	90
20	34.430	38	51.69	64	3.532	82	68.75	164	39.341	56	45.69	122	11.402	44	45.86	84
30	34.392	80	51.05	52	3.450	152	70.39	142	39.285	115	46.91	106	11.358	96	46.70	75
Feb. 9	34.312	116	50.53	40	3.298	210	71.81	113	39.170	163	47.97	86	11.262	140	47.45	61
19	34.196	143	50.13	29	3.088	256	72.94	81	39.007	203	48.83	61	11.122	175	48.06	43
März 1	34.053	161	49.84	18	2.832	284	73.75	45	38.804	227	49.44	33	10.947	198	48.49	23
11	33.892	167	49.66	8	2.548	297	74.20	6	38.577	238	49.77	5	10.749	207	48.72	2
21	33.725	164	49.58	2	2.251	292	74.26	31	38.339	234	49.82	24	10.542	204	48.74	19
31	33.561	151	49.60	13	1.959	270	73.95	67	38.105	216	49.58	52	10.338	188	48.55	39
Apr. 10	33.410	128	49.73	24	1.689	234	73.28	100	37.889	185	49.06	77	10.150	160	48.16	56
20	33.282	98	49.97	35	1.455	184	72.28	127	37.704	143	48.29	97	9.990	123	47.60	71
30	33.184	63	50.32	46	1.271	125	71.01	150	37.561	95	47.32	113	9.867	80	46.89	82
Mai 10	33.121	22	50.78	57	1.146	61	69.51	167	37.466	39	46.19	125	9.787	30	46.07	88
20	33.099	19	51.35	69	1.085	10	67.84	177	37.427	18	44.94	131	9.757	22	45.19	92
30	33.118	61	52.04	79	1.095	79	66.07	181	37.445	77	43.63	133	9.779	74	44.27	91
Juni 9	33.179	102	52.83	88	1.174	148	64.26	180	37.522	133	42.30	131	9.853	125	43.36	88
19	33.281	140	53.71	94	1.322	213	62.46	174	37.655	187	40.99	124	9.978	172	42.48	81
29	33.421	176	54.65	99	1.535	272	60.72	164	37.842	237	39.75	115	10.150	216	41.67	73
Juli 9	33.597	206	55.64	98	1.807	327	59.08	150	38.079	280	38.60	104	10.366	255	40.94	64
19	33.803	233	56.62	96	2.134	373	57.58	132	38.359	318	37.56	91	10.621	289	40.30	54
29	34.036	255	57.58	89	2.507	413	56.26	113	38.677	350	36.65	76	10.910	315	39.76	44
Aug. 8	34.291	273	58.47	77	2.920	444	55.13	92	39.027	375	35.89	61	11.225	339	39.32	35
18	34.564	286	59.24	63	3.364	469	54.21	70	39.402	395	35.28	46	11.564	355	38.97	25
28	34.850	295	59.87	45	3.833	487	53.51	46	39.797	409	34.82	30	11.919	368	38.72	16
Sept. 7	35.145	302	60.32	24	4.320	499	53.05	23	40.206	418	34.52	15	12.287	375	38.56	8
17	35.447	303	60.56	1	4.819	503	52.82	1	40.624	422	34.37	1	12.662	379	38.48	0
27	35.750	302	60.57	21	5.322	501	52.83	25	41.046	420	34.38	16	13.041	378	38.48	8
Okt. 7	36.052	296	60.36	43	5.823	492	53.08	49	41.466	414	34.54	31	13.419	372	38.56	15
17	36.348	288	59.93	64	6.315	477	53.57	73	41.880	401	34.85	47	13.791	361	38.71	24
27	36.636	274	59.29	81	6.792	452	54.30	96	42.281	383	35.32	63	14.152	346	38.95	33
Nov. 6	36.910	256	58.48	94	7.244	419	55.26	119	42.664	356	35.95	79	14.498	322	39.28	44
16	37.166	230	57.54	104	7.663	376	56.45	140	43.020	323	36.74	95	14.820	294	39.72	54
26	37.396	201	56.50	108	8.039	324	57.85	158	43.343	280	37.69	108	15.114	256	40.26	65
Dez. 6	37.597	166	55.42	107	8.363	263	59.43	173	43.623	230	38.77	121	15.370	212	40.91	74
16	37.763	124	54.35	103	8.626	193	61.16	181	43.853	174	39.98	128	15.582	162	41.65	81
25	[19]37.887	81	53.32	96	[20]8.819	118	62.97	185	[20]44.027	111	41.26	133	[20]15.744	106	42.46	87
35	37.968		52.36		8.937		64.82		44.138		42.59		15.850		43.33	
Mittl. Ort	32.642		46.03		0.610		54.67		36.860		33.21		9.158		34.79	
sec δ, tg δ	1.008		+0.130		1.713		+1.391		1.413		+0.998		1.256		+0.759	
a, *a'*	+3.2		+0.7		+4.9		+0.5		+4.4		+0.5		+4.1		+0.4	
b, *b'*	0.00		−1.00		0.00		−1.00		0.00		−1.00		0.00		−1.00	

Tag	229) η Columbae AR.		229) η Columbae Dekl.		232) ν Orionis AR.		232) ν Orionis Dekl.		236) η Geminorum AR.		236) η Geminorum Dekl.		234) 22 H. Camelop. AR.		234) 22 H. Camelop. Dekl.	
1933	5h 57m		−42° 48′		6h 3m		+14° 46′		6h 10m		+22° 31′		6h 11m		+69° 20′	
Jan. 0	7.804 s	19	61.18 ″	312	46.613 s	70	47.78 ″	46	51.930 s	82	47.95 ″	0	32.74 s	10	57.02 ″	259
10	7.785	78	64.30	285	46.683	21	47.32	37	52.012	30	47.95	6	32.84	2	59.61	250
20	7.707	132	67.15	251	46.704	27	46.95	29	52.042	20	48.01	12	32.82	15	62.11	233
30	7.575	181	69.66	211	46.677	71	46.66	22	52.022	68	48.13	14	32.67	26	64.44	206
Feb. 9	7.394	222	71.77	167	46.606	109	46.44	15	51.954	109	48.27	15	32.41	36	66.50	172
19	7.172	253	73.44	120	46.497	139	46.29	10	51.845	141	48.42	12	32.05	44	68.22	129
März 1	6.919	273	74.64	70	46.358	160	46.19	6	51.704	164	48.54	9	31.61	50	69.51	82
11	6.646	281	75.34	21	46.198	169	46.13	4	51.540	176	48.63	3	31.11	52	70.33	33
21	6.365	278	75.55	28	46.029	167	46.09	1	51.364	175	48.66	2	30.59	52	70.66	18
31	6.087	264	75.27	76	45.862	156	46.08	1	51.189	164	48.64	7	30.07	49	70.48	66
Apr. 10	5.823	240	74.51	121	45.706	134	46.09	5	51.025	143	48.57	12	29.58	45	69.82	113
20	5.583	207	73.30	164	45.572	105	46.14	10	50.882	113	48.45	15	29.13	38	68.69	153
30	5.376	165	71.66	202	45.467	70	46.24	14	50.769	76	48.30	17	28.75	29	67.16	187
Mai 10	5.211	119	69.64	237	45.397	30	46.38	21	50.693	36	48.13	15	28.46	19	65.29	215
20	5.092	70	67.27	265	45.367	13	46.59	28	50.657	8	47.98	13	28.27	8	63.14	234
30	5.022	18	64.62	287	45.380	55	46.87	35	50.665	52	47.85	10	28.19	3	60.80	247
Juni 9	5.004	35	61.75	302	45.435	97	47.22	41	50.717	96	47.75	6	28.22	14	58.33	253
19	5.039	87	58.73	308	45.532	136	47.63	48	50.813	137	47.69	1	28.36	25	55.80	250
29	5.126	136	55.65	308	45.668	172	48.11	52	50.950	175	47.68	4	28.61	35	53.30	242
Juli 9	5.262	181	52.57	297	45.840	205	48.63	53	51.125	209	47.72	8	28.96	45	50.88	228
19	5.443	224	49.60	277	46.045	232	49.16	54	51.334	238	47.80	10	29.41	53	48.60	209
29	5.667	261	46.83	250	46.277	256	49.70	51	51.572	264	47.90	11	29.94	60	46.51	186
Aug. 8	5.928	293	44.33	212	46.533	275	50.21	44	51.836	285	48.01	10	30.54	66	44.65	158
18	6.221	318	42.21	168	46.808	291	50.65	36	52.121	301	48.11	7	31.20	71	43.07	129
28	6.539	337	40.53	117	47.099	301	51.01	24	52.422	313	48.18	1	31.91	76	41.78	98
Sept. 7	6.876	351	39.36	60	47.400	309	51.25	10	52.735	323	48.19	5	32.67	78	40.80	63
17	7.227	355	38.76	1	47.709	313	51.35	5	53.058	328	48.14	12	33.45	80	40.17	27
27	7.582	354	38.75	61	48.022	313	51.30	20	53.386	330	48.02	19	34.25	80	39.90	9
Okt. 7	7.936	345	39.36	120	48.335	311	51.10	35	53.716	327	47.83	26	35.05	79	39.99	45
17	8.281	328	40.56	177	48.646	303	50.75	48	54.043	321	47.57	31	35.84	77	40.44	83
27	8.609	303	42.33	227	48.949	291	50.27	59	54.364	310	47.26	35	36.61	73	41.27	118
Nov. 6	8.912	271	44.60	270	49.240	273	49.68	67	54.674	293	46.91	36	37.34	67	42.45	153
16	9.183	230	47.30	303	49.513	250	49.01	70	54.967	269	46.55	34	38.01	61	43.98	185
26	9.413	185	50.33	326	49.763	221	48.31	71	55.236	238	46.21	30	38.62	52	45.83	212
Dez. 6	9.598	132	53.59	337	49.984	186	47.60	68	55.474	203	45.91	23	39.14	42	47.95	234
16	21 9.730	76	56.96	336	22 50.170	143	46.92	62	24 55.677	159	45.68	16	24 39.56	31	50.29	249
25	9.806	17	60.32	326	50.313	99	46.30	54	55.836	112	45.52	8	39.87	18	52.78	257
35	9.823		63.58		50.412		45.76		55.948		45.44		40.05		55.35	
Mittl. Ort	5.752		65.85		44.810		40.35		50.024		40.40		28.04		47.41	
sec δ, tg δ	1.363		−0.927		1.034		+0.264		1.083		+0.415		2.835		+2.653	
a, *a′*	+1.8		+0.3		+3.4		−0.3		+3.6		−0.9		+6.6		−1.0	
b, *b′*	0.00		−1.00		0.00		−1.00		0.00		−1.00		−0.01		−1.00	

Tag	240) ζ Canis maj.				241) μ Geminorum				242) ψ¹ Aurigae				243) β Canis maj.			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	6h 17m		−30° 1′		6h 18m		+22° 32′		6h 19m		+49° 19′		6h 19m		−17° 54′	
Jan. 0	46.237	34	51.26	283	56.397	90	65.95	2	47.109	109	35.28	159	46.650	54	71.10	233
10	46.271	18	54.09	262	56.487	39	65.93	5	47.218	38	36.87	158	46.704	6	73.43	214
20	46.253	68	56.71	234	56.526	13	65.98	12	47.256	34	38.45	151	46.710	42	75.57	189
30	46.185	115	59.05	200	56.513	61	66.10	15	47.222	101	39.96	138	46.668	87	77.46	162
Feb. 9	46.070	155	61.05	163	56.452	103	66.25	16	47.121	160	41.34	118	46.581	124	79.08	131
19	45.915	187	62.68	122	56.349	138	66.41	15	46.961	206	42.52	92	46.457	155	80.39	98
März 1	45.728	207	63.90	81	56.211	161	66.56	12	46.755	240	43.44	63	46.302	177	81.37	65
11	45.521	220	64.71	39	56.050	174	66.68	6	46.515	258	44.07	30	46.125	187	82.02	31
21	45.301	221	65.10	4	55.876	175	66.74	1	46.257	260	44.37	3	45.938	189	82.33	3
31	45.080	211	65.06	45	55.701	166	66.75	5	45.997	247	44.34	35	45.749	181	82.30	36
Apr. 10	44.869	193	64.61	86	55.535	146	66.70	10	45.750	220	43.99	66	45.568	163	81.94	67
20	44.676	165	63.75	123	55.389	117	66.60	13	45.530	182	43.33	93	45.405	137	81.27	98
30	44.511	133	62.52	158	55.272	82	66.47	15	45.348	133	42.40	117	45.268	105	80.29	127
Mai 10	44.378	93	60.94	190	55.190	41	66.32	16	45.215	77	41.23	134	45.163	69	79.02	152
20	44.285	51	59.04	218	55.149	1	66.16	14	45.138	18	39.89	147	45.094	29	77.50	175
30	44.234	8	56.86	239	55.150	45	66.02	11	45.120	43	38.42	155	45.065	11	75.75	193
Juni 9	44.226	36	54.47	255	55.195	88	65.91	7	45.163	104	36.87	158	45.076	52	73.82	207
19	44.262	80	51.92	264	55.283	129	65.84	4	45.267	162	35.29	157	45.128	91	71.75	215
29	44.342	122	49.28	267	55.412	167	65.80	0	45.429	217	33.72	152	45.219	129	69.60	218
Juli 9	44.464	160	46.61	260	55.579	202	65.80	4	45.646	266	32.20	143	45.348	163	67.42	214
19	44.624	195	44.01	248	55.781	232	65.84	5	45.912	311	30.77	132	45.511	195	65.28	202
29	44.819	227	41.53	224	56.013	258	65.89	5	46.223	348	29.45	118	45.706	222	63.26	185
Aug. 8	45.046	254	39.29	195	56.271	279	65.94	4	46.571	381	28.27	104	45.928	245	61.41	160
18	45.300	277	37.34	158	56.550	297	65.98	1	46.952	407	27.23	87	46.173	264	59.81	129
28	45.577	294	35.76	114	56.847	311	65.99	5	47.359	428	26.36	70	46.437	281	58.52	93
Sept. 7	45.871	308	34.62	65	57.158	321	65.94	11	47.787	443	25.66	52	46.718	292	57.59	51
17	46.179	316	33.97	13	57.479	327	65.83	18	48.230	452	25.14	33	47.010	298	57.08	6
27	46.495	319	33.84	42	57.806	330	65.65	26	48.682	457	24.81	14	47.308	303	57.02	39
Okt. 7	46.814	317	34.26	96	58.136	330	65.39	32	49.139	454	24.67	6	47.611	300	57.41	84
17	47.131	307	35.22	148	58.466	324	65.07	38	49.593	447	24.73	28	47.911	294	58.25	128
27	47.438	292	36.70	193	58.790	315	64.69	41	50.040	431	25.01	49	48.205	282	59.53	166
Nov. 6	47.730	270	38.63	234	59.105	298	64.28	41	50.471	406	25.50	71	48.487	264	61.19	199
16	48.000	241	40.97	266	59.403	276	63.87	39	50.877	374	26.21	93	48.751	239	63.18	226
26	48.241	205	43.63	288	59.679	247	63.48	35	51.251	331	27.14	112	48.990	208	65.44	242
Dez. 6	48.446	164	46.51	300	59.926	210	63.13	28	51.582	279	28.26	130	49.198	172	67.86	251
16	48.610	116	49.51	303	60.136	168	62.85	19	51.861	218	29.56	144	49.370	130	70.37	252
26	48.726	66	52.54	294	60.304	121	62.66	10	52.079	152	31.00	153	49.500	82	72.89	243
35	48.792		55.48		60.425		62.56		52.231		32.53		49.582		75.32	
Mittl. Ort	44.420		57.04		54.478		58.77		44.422		27.16		44.923		77.12	
sec δ, tg δ	1.155		−0.578		1.083		+0.415		1.534		+1.164		1.051		−0.323	
a, *a′*	+2.3		−1.6		+3.6		−1.7		+4.6		−1.7		+2.6		−1.7	
b, *b′*	0.00		−1.00		0.00		−1.00		−0.01		−1.00		0.00		−1.00	

Tag	244) δ Monocerotis AR.		Dekl.		245) α Argus AR.		Dekl.		246) 10 Monocerotis AR.		Dekl.		247) δ Lyncis AR.		Dekl.	
1933	6h 20m		+4° 37′		6h 22m		−52° 39′		6h 24m		−4° 42′		6h 31m		+61° 32′	
Jan. 0	14.834	78	48.27	112	30.126	19	24.75	346	40.780	74	63.45	167	37.97	14	40.51	221
10	14.912	31	47.15	99	30.107	90	28.21	324	40.854	26	65.12	151	38.11	4	42.72	219
20	14.943	18	46.16	84	30.017	158	31.45	292	40.880	21	66.63	132	38.15	5	44.91	211
30	14.925	62	45.32	68	29.859	218	34.37	253	40.859	65	67.95	111	38.10	14	47.02	192
Feb. 9	14.863	100	44.64	52	29.641	270	36.90	209	40.794	104	69.06	89	37.96	22	48.94	166
19	14.763	131	44.12	38	29.371	311	38.99	161	40.690	135	69.95	66	37.74	29	50.60	133
März 1	14.632	153	43.74	24	29.060	339	40.60	110	40.555	157	70.61	43	37.45	34	51.93	94
11	14.479	165	43.50	10	28.721	355	41.70	57	40.398	169	71.04	21	37.11	37	52.87	51
21	14.314	167	43.40	3	28.366	357	42.27	5	40.229	170	71.25	2	36.74	37	53.38	8
31	14.147	158	43.43	15	28.009	347	42.32	47	40.059	164	71.23	24	36.37	36	53.46	36
Apr. 10	13.989	139	43.58	28	27.662	325	41.85	97	39.895	146	70.99	44	36.01	34	53.10	78
20	13.850	114	43.86	41	27.337	292	40.88	144	39.749	121	70.55	64	35.67	28	52.32	116
30	13.736	82	44.27	53	27.045	250	39.44	187	39.628	91	69.91	84	35.39	22	51.16	148
Mai 10	13.654	45	44.80	65	26.795	201	37.57	227	39.537	55	69.07	102	35.17	15	49.68	176
20	13.609	6	45.45	76	26.594	147	35.30	260	39.482	16	68.05	118	35.02	8	47.92	197
30	13.603	34	46.21	86	26.447	89	32.70	288	39.466	23	66.87	132	34.94	1	45.95	212
Juni 9	13.637	74	47.07	95	26.358	27	29.82	308	39.489	61	65.55	143	34.95	9	43.83	220
19	13.711	112	48.02	100	26.331	33	26.74	319	39.550	99	64.12	150	35.04	17	41.63	221
29	13.823	147	49.02	103	26.364	93	23.55	323	39.649	135	62.62	152	35.21	24	39.42	219
Juli 9	13.970	179	50.05	103	26.457	152	20.32	316	39.784	168	61.10	151	35.45	32	37.23	210
19	14.149	207	51.08	99	26.609	207	17.16	301	39.952	196	59.59	143	35.77	38	35.13	197
29	14.356	232	52.07	90	26.816	257	14.15	274	40.148	222	58.16	131	36.15	43	33.16	180
Aug. 8	14.588	253	52.97	77	27.073	301	11.41	241	40.370	244	56.85	112	36.58	48	31.36	160
18	14.841	270	53.74	61	27.374	341	9.00	197	40.614	261	55.73	91	37.06	52	29.76	137
28	15.111	282	54.35	41	27.715	371	7.03	145	40.875	276	54.82	63	37.58	56	28.39	112
Sept. 7	15.393	293	54.76	17	28.086	395	5.58	88	41.151	287	54.19	32	38.14	58	27.27	86
17	15.686	300	54.93	8	28.481	408	4.70	26	41.438	294	53.87	2	38.72	60	26.41	57
27	15.986	302	54.85	33	28.889	414	4.44	37	41.732	298	53.89	37	39.32	60	25.84	26
Okt. 7	16.288	302	54.52	58	29.303	409	4.81	102	42.030	298	54.26	70	39.92	61	25.58	5
17	16.590	296	53.94	81	29.712	393	5.83	164	42.328	293	54.96	102	40.53	60	25.63	36
27	16.886	288	53.13	102	30.105	367	7.47	221	42.621	284	55.98	132	41.13	57	25.99	69
Nov. 6	17.174	272	52.11	118	30.472	330	9.68	270	42.905	268	57.30	154	41.70	54	26.68	101
16	17.446	250	50.93	128	30.802	284	12.38	310	43.173	247	58.84	172	42.24	50	27.69	131
26	17.696	224	49.65	134	31.086	228	15.48	339	43.420	219	60.56	183	42.74	44	29.00	159
Dez. 6	17.920	189	48.31	134	31.314	166	18.87	358	43.639	186	62.39	188	43.18	37	30.59	184
16	18.109	150	46.97	130	31.480	98	22.45	363	43.825	145	64.27	185	43.55	29	32.43	202
26	18.259	106	45.67	122	31.578	25	26.08	358	43.970	102	66.12	177	43.84	20	34.45	215
35	[27] 18.365		44.45		[27] 31.603		29.66		[28] 44.072		67.89		[29] 44.04		36.60	
Mittl. Ort	13.090		41.71		27.797		30.67		39.068		69.73		34.32		33.05	
sec δ, tg δ	1.003		+0.081		1.649		−1.311		1.003		−0.083		2.099		+1.845	
a, a′	+3.2		−1.8		+1.3		−2.0		+3.0		−2.2		+5.5		−2.8	
b, b′	0.00		−1.00		+0.01		−1.00		0.00		−0.99		−0.02		−0.99	

Scheinbare Sternörter 1933

Tag	249) ξ² Canis maj.				251) γ Geminorum				250) 51 Aurigae				248) 23 H. Camelop.			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	6ʰ 32ᵐ		−22° 54′		6ʰ 33ᵐ		+16° 27′		6ʰ 34ᵐ		+39° 27′		6ʰ 34ᵐ		+79° 38′	
Jan. 0	16.615	61	31.98	261	52.387	101	35.18	44	3.405	120	12.93	99	59.28	23	37.00	294
10	16.676	10	34.59	242	52.488	51	34.74	33	3.525	58	13.92	104	59.51	2	39.94	292
20	16.686	40	37.01	217	52.539	1	34.41	22	3.583	4	14.96	104	59.49	27	42.86	276
30	16.646	85	39.18	188	52.538	47	34.19	13	3.579	63	16.00	100	59.22	49	45.62	251
Feb. 9	16.561	126	41.06	154	52.491	91	34.06	6	3.516	115	17.00	88	58.73	70	48.13	216
19	16.435	159	42.60	119	52.400	125	34.00	1	3.401	159	17.88	74	58.03	86	50.29	171
März 1	16.276	183	43.79	82	52.275	150	33.99	3	3.242	190	18.62	55	57.17	98	52.00	120
11	16.093	196	44.61	45	52.125	166	34.02	5	3.052	208	19.17	34	56.19	106	53.20	66
21	15.897	200	45.06	7	51.959	169	34.07	5	2.844	214	19.51	10	55.13	108	53.86	9
31	15.697	192	45.13	30	51.790	163	34.12	6	2.630	206	19.61	14	54.05	106	53.95	48
Apr. 10	15.505	177	44.83	65	51.627	145	34.18	6	2.424	185	19.47	36	52.99	99	53.47	102
20	15.328	153	44.18	99	51.482	121	34.24	8	2.239	155	19.11	55	52.00	88	52.45	152
30	15.175	122	43.19	131	51.361	88	34.32	10	2.084	115	18.56	74	51.12	73	50.93	194
Mai 10	15.053	87	41.88	160	51.273	52	34.42	13	1.969	70	17.82	86	50.39	55	48.99	231
20	14.966	49	40.28	185	51.221	12	34.55	16	1.899	21	16.96	97	49.84	36	46.68	260
30	14.917	7	38.43	207	51.209	30	34.71	21	1.878	30	15.99	103	49.48	16	44.08	279
Juni 9	14.910	34	36.36	222	51.239	70	34.92	24	1.908	81	14.96	107	49.32	6	41.29	292
19	14.944	74	34.14	232	51.309	109	35.16	28	1.989	130	13.89	106	49.38	27	38.37	296
29	15.018	113	31.82	236	51.418	146	35.44	31	2.119	176	12.83	104	49.65	47	35.41	292
Juli 9	15.131	149	29.46	232	51.564	180	35.75	31	2.295	218	11.79	100	50.12	66	32.49	282
19	15.280	182	27.14	221	51.744	209	36.06	31	2.513	256	10.79	94	50.78	85	29.67	266
29	15.462	212	24.93	204	51.953	236	36.37	27	2.769	289	9.85	86	51.63	100	27.01	243
Aug. 8	15.674	238	22.89	177	52.189	258	36.64	21	3.058	316	8.99	79	52.63	115	24.58	215
18	15.912	261	21.12	145	52.447	277	36.85	13	3.374	340	8.20	71	53.78	127	22.43	184
28	16.173	278	19.67	106	52.724	291	36.98	3	3.714	360	7.49	62	55.05	136	20.59	149
Sept. 7	16.451	293	18.61	62	53.015	304	37.01	10	4.074	374	6.87	54	56.41	144	19.10	111
17	16.744	302	17.99	15	53.319	312	36.91	24	4.448	384	6.33	45	57.85	149	17.99	69
27	17.046	308	17.84	35	53.631	318	36.67	38	4.832	392	5.88	35	59.34	151	17.30	27
Okt. 7	17.354	308	18.19	84	53.949	320	36.29	50	5.224	392	5.53	25	60.85	151	17.03	17
17	17.662	304	19.03	131	54.269	317	35.79	62	5.616	389	5.28	12	62.36	147	17.20	62
27	17.966	292	20.34	175	54.586	309	35.17	71	6.005	379	5.16	2	63.83	142	17.82	106
Nov. 6	18.258	275	22.09	212	54.895	296	34.46	76	6.384	363	5.18	16	65.25	131	18.88	149
16	18.533	250	24.21	242	55.191	277	33.70	78	6.747	337	5.34	32	66.56	119	20.37	189
26	18.783	220	26.63	263	55.468	249	32.92	77	7.084	304	5.66	49	67.75	103	22.26	224
Dez. 6	19.003	181	29.26	274	55.717	216	32.15	71	7.388	262	6.15	64	68.78	83	24.50	255
16	19.184	139	32.00	278	55.933	175	31.44	63	7.650	212	6.79	79	69.61	62	27.05	277
26	30 19.323	91	34.78	271	30 56.108	130	30.81	53	30 7.862	156	7.58	91	30 70.23	38	29.82	288
35	19.414		37.49		56.238		30.28		8.018		8.49		70.61		32.70	
Mittl. Ort	14.870		38.18		50.532		28.80		1.081		6.19		50.04		29.39	
sec δ, tg δ	1.086		−0.423		1.043		+0.295		1.295		+0.823		5.561		+5.471	
a, *a′*	+2.5		−2.8		+3.5		−2.9		+4.2		−3.0		+10.3		−3.0	
b, *b′*	0.00		−0.99		0.00		−0.99		−0.01		−0.99		−0.06		−0.99	

Tag	252) ν Argus AR.		252) ν Argus Dekl.		253) *S* Monocerotis AR.		253) *S* Monocerotis Dekl.		254) ε Geminorum AR.		254) ε Geminorum Dekl.		256) ξ Geminorum AR.		256) ξ Geminorum Dekl.	
1933	$6^h 35^m$		$-43° 7'$		$6^h 37^m$		$+9° 57'$		$6^h 39^m$		$+25° 11'$		$6^h 41^m$		$+12° 58'$	
Jan. 0*)	44.648	29	65.06	333	19.137	99	39.29	85	50.685	114	63.02	10	33.614	106	15.42	68
10	44.677	32	68.39	314	19.236	49	38.44	72	50.799	61	63.12	19	33.720	55	14.74	56
20	44.645	91	71.53	285	19.285	1	37.72	59	50.860	6	63.31	27	33.775	5	14.18	43
30	44.554	146	74.38	249	19.286	46	37.13	46	50.866	44	63.58	31	33.780	42	13.75	31
Feb. 9	44.408	193	76.87	210	19.240	88	36.67	33	50.822	91	63.89	32	33.738	85	13.44	21
19	44.215	232	78.97	164	19.152	122	36.34	22	50.731	128	64.21	30	33.653	120	13.23	12
März 1	43.983	259	80.61	117	19.030	147	36.12	12	50.603	157	64.51	26	33.533	146	13.11	5
11	43.724	275	81.78	69	18.883	162	36.00	3	50.446	173	64.77	19	33.387	162	13.06	1
21	43.449	281	82.47	19	18.721	166	35.97	4	50.273	179	64.96	10	33.225	167	13.07	5
31	43.168	274	82.66	29	18.555	159	36.01	11	50.094	172	65.06	2	33.058	161	13.12	9
Apr. 10	42.894	256	82.37	76	18.396	145	36.12	18	49.922	156	65.08	7	32.897	147	13.21	13
20	42.638	230	81.61	122	18.251	120	36.30	25	49.766	130	65.01	14	32.750	123	13.34	18
30	42.408	196	80.39	164	18.131	90	36.55	33	49.636	98	64.87	20	32.627	92	13.52	22
Mai 10	42.212	155	78.75	201	18.041	55	36.88	40	49.538	59	64.67	24	32.535	57	13.74	27
20	42.057	110	76.74	235	17.986	16	37.28	48	49.479	17	64.43	26	32.478	19	14.01	32
30	41.947	61	74.39	262	17.970	23	37.76	54	49.462	26	64.17	27	32.459	21	14.33	37
Juni 9	41.886	12	71.77	283	17.993	63	38.30	60	49.488	69	63.90	26	32.480	60	14.70	42
19	41.874	39	68.94	296	18.056	101	38.90	65	49.557	111	63.64	25	32.540	99	15.12	46
29	41.913	89	65.98	301	18.157	136	39.55	67	49.668	150	63.39	23	32.639	135	15.58	48
Juli 9	42.002	136	62.97	297	18.293	169	40.22	67	49.818	185	63.16	21	32.774	169	16.06	48
19	42.138	180	60.00	285	18.462	198	40.89	65	50.003	217	62.95	20	32.943	198	16.54	46
29	42.318	222	57.15	263	18.660	225	41.54	58	50.220	246	62.75	20	33.141	224	17.00	40
Aug. 8	42.540	259	54.52	232	18.885	247	42.12	48	50.466	270	62.55	21	33.365	247	17.40	33
18	42.799	291	52.20	192	19.132	265	42.60	36	50.736	290	62.34	24	33.612	267	17.73	22
28	43.090	317	50.28	145	19.397	281	42.96	19	51.026	306	62.10	27	33.879	282	17.95	8
Sept. 7	43.407	339	48.83	91	19.678	293	43.15	2	51.332	321	61.83	32	34.161	296	18.03	8
17	43.746	353	47.92	34	19.971	302	43.17	19	51.653	330	61.51	37	34.457	305	17.95	25
27	44.099	360	47.58	28	20.273	308	42.98	39	51.983	337	61.14	42	34.762	311	17.70	42
Okt. 7	44.459	360	47.86	89	20.581	310	42.59	59	52.320	339	60.72	45	35.073	315	17.28	58
17	44.819	351	48.75	148	20.891	308	42.00	77	52.659	338	60.27	48	35.388	313	16.70	74
27	45.170	335	50.23	203	21.199	301	41.23	92	52.997	331	59.79	48	35.701	307	15.96	86
Nov. 6	45.505	309	52.26	252	21.500	289	40.31	103	53.328	318	59.31	46	36.008	295	15.10	95
16	45.814	275	54.78	291	21.789	269	39.28	111	53.646	297	58.85	40	36.303	276	14.15	99
26	46.089	232	57.69	321	22.058	243	38.17	112	53.943	270	58.45	32	36.579	250	13.16	99
Dez. 6	46.321	183	60.90	339	22.301	211	37.05	111	54.213	235	58.13	22	36.829	218	12.17	95
16	46.504	127	64.29	348	22.512	171	35.94	104	54.448	193	57.91	11	37.047	178	11.22	89
26	46.631	67	67.77	342	22.683	127	34.90	94	54.641	145	57.80	0	37.225	134	10.33	77
35	[30] 46.698		71.19		[31] 22.810		33.96		[32] 54.786		57.80		[32] 37.359		9.56	
Mittl. Ort	42.642		71.55		17.346		33.09		48.697		56.85		31.793		9.36	
sec δ, lg δ	1.370		−0.937		1.015		+0.176		1.105		+0.471		1.026		+0.230	
a, *a'*	+1.8		−3.1		+3.3		−3.2		+3.7		−3.5		+3.4		−3.6	
b, *b'*	+0.01		−0.99		0.00		−0.99		−0.01		−0.98		0.00		−0.98	

*) Bei Stern 256) lies Jan. 1

Scheinbare Sternörter 1933

Tag	257) α Canis maj.[1] AR.		Dekl.		258) 18 Monocerotis AR.		Dekl.	
1933	6h 42m		−16° 37′		6h 44m		+2° 29′	
Jan. 1	[1] 13.419	74	19.20	238	[1] 23.844	99	18.41	133
10	13.493	24	21.58	220	23.943	51	17.08	118
20	13.517	25	23.78	197	23.994	2	15.90	101
30	13.492	70	25.75	170	23.996	44	14.89	84
Feb. 9	13.422	111	27.45	140	23.952	85	14.05	65
19	13.311	144	28.85	108	23.867	120	13.40	48
März 1	13.167	169	29.93	76	23.747	145	12.92	31
11	12.998	182	30.69	43	23.602	160	12.61	15
21	12.816	186	31.12	10	23.442	166	12.46	0
31	12.630	180	31.22	22	23.276	161	12.46	14
Apr. 10	12.450	166	31.00	53	23.115	147	12.60	29
20	12.284	142	30.47	82	22.968	124	12.89	42
30	12.142	114	29.65	110	22.844	96	13.31	56
Mai 10	12.028	79	28.55	134	22.748	62	13.87	69
20	11.949	41	27.21	157	22.686	26	14.56	80
30	11.908	3	25.64	175	22.660	13	15.36	91
Juni 9	11.905	37	23.89	189	22.673	51	16.27	99
19	11.942	76	22.00	199	22.724	88	17.26	104
29	12.018	113	20.01	202	22.812	123	18.30	107
Juli 9	12.131	147	17.99	199	22.935	156	19.37	106
19	12.278	179	16.00	189	23.091	185	20.43	102
29	12.457	207	14.11	174	23.276	212	21.45	92
Aug. 8	12.664	231	12.37	150	23.488	234	22.37	79
18	12.895	253	10.87	122	23.722	254	23.16	61
28	13.148	271	9.65	86	23.976	270	23.77	39
Sept. 7	13.419	285	8.79	47	24.246	284	24.16	15
17	13.704	295	8.32	4	24.530	294	24.31	12
27	13.999	300	8.28	40	24.824	300	24.19	40
Okt. 7	14.299	303	8.68	85	25.124	304	23.79	68
17	14.602	299	9.53	128	25.428	303	23.11	93
27	14.901	290	10.81	167	25.731	297	22.18	115
Nov. 6	15.191	275	12.48	199	26.028	284	21.03	134
16	15.466	253	14.47	226	26.312	266	19.69	146
26	15.719	225	16.73	244	26.578	242	18.23	154
Dez. 6	15.944	189	19.17	254	26.820	209	16.69	155
16	16.133	148	21.71	255	27.029	170	15.14	151
26	16.281	103	24.26	248	27.199	127	13.63	142
35	[32] 16.384		26.74		[33] 27.326		12.21	
Mittl. Ort	11.709		25.24		22.105		12.37	
sec δ, tg δ	1.044		−0.299		1.001		+0.043	
a, *a′*	+2.7		−3.7		+3.1		−3.9	
b, *b′*	0.00		−0.98		0.00		−0.98	

Tag	262) α Pictoris AR.		Dekl.		261) ϑ Geminorum AR.		Dekl.	
1933	6h 47m		−61° 51′		6h 48m		+34° 2′	
Jan. 1	[2] 33.07	1	61.44	368	[2] 24.723	132	43.08	62
10	33.06	11	65.12	351	24.855	73	43.70	72
20	32.95	20	68.63	324	24.928	14	44.42	76
30	32.75	27	71.87	289	24.942	42	45.18	77
Feb. 9	32.48	35	74.76	248	24.900	93	45.95	73
19	32.13	40	77.24	201	24.807	136	46.68	65
März 1	31.73	44	79.25	151	24.671	168	47.33	52
11	31.29	47	80.76	98	24.503	188	47.85	36
21	30.82	48	81.74	45	24.315	196	48.21	19
31	30.34	47	82.19	9	24.119	192	48.40	1
Apr. 10	29.87	46	82.10	61	23.927	175	48.41	17
20	29.41	42	81.49	113	23.752	148	48.24	33
30	28.99	38	80.36	160	23.604	115	47.91	47
Mai 10	28.61	33	78.76	203	23.489	74	47.44	58
20	28.28	26	76.73	242	23.415	29	46.86	68
30	28.02	19	74.31	275	23.386	17	46.18	74
Juni 9	27.83	12	71.56	300	23.403	63	45.44	77
19	27.71	5	68.56	318	23.466	109	44.67	79
29	27.66	3	65.38	326	23.575	151	43.88	77
Juli 9	27.69	11	62.12	326	23.726	191	43.11	76
19	27.80	18	58.86	315	23.917	227	42.35	74
29	27.98	25	55.71	295	24.144	258	41.61	71
Aug. 8	28.23	32	52.76	265	24.402	285	40.90	67
18	28.55	38	50.11	224	24.687	309	40.23	64
28	28.93	43	47.87	176	24.996	328	39.59	61
Sept. 7	29.36	47	46.11	120	25.324	345	38.98	58
17	29.83	49	44.91	59	25.669	356	38.40	55
27	30.32	50	44.32	7	26.025	366	37.85	51
Okt. 7	30.82	51	44.39	73	26.391	369	37.34	45
17	31.33	50	45.12	138	26.760	369	36.89	38
27	31.83	47	46.50	199	27.129	363	36.51	30
Nov. 6	32.30	43	48.49	255	27.492	350	36.21	19
16	32.73	37	51.04	300	27.842	329	36.02	6
26	33.10	30	54.04	337	28.171	299	35.96	9
Dez. 6	33.40	22	57.41	362	28.470	263	36.05	24
16	33.62	13	61.03	375	28.733	217	36.29	40
26	33.75	4	64.78	375	28.950	164	36.69	52
35	[33] 33.79		68.53		[34] 29.114		37.21	
Mittl. Ort	30.32		69.01		22.534		37.40	
sec δ, tg δ	2.121		−1.871		1.207		+0.676	
a, *a′*	+0.6		−4.1		+4.0		−4.2	
b, *b′*	+0.03		−0.98		−0.01		−0.98	

[1]) Ort des Hauptsterns; die jährliche Parallaxe (0.″38) ist bereits berücksichtigt.

Tag	266) ϑ Canis maj. AR.	Δ	266) ϑ Canis maj. Dekl.	Δ	265) 15 Lyncis AR.	Δ	265) 15 Lyncis Dekl.	Δ	268) ε Canis maj. AR.	Δ	268) ε Canis maj. Dekl.	Δ	269) ζ Geminorum AR.	Δ	269) ζ Geminorum Dekl.	Δ
1933	6h 51m		−11° 56′		6h 51m		+58° 30′		6h 55m		−28° 52′		7h 0m		+20° 40′	
Jan. 1	6.323	93	66.25	215	32.296	175	52.00	202	61.271	79	40.62	296	10.137	131	17.74	25
10	[3] 6.416	43	68.40	200	[3] 32.471	84	54.02	207	[4] 61.350	25	43.58	279	[5] 10.268	79	17.49	12
20	6.459	6	70.40	178	32.555	7	56.09	203	61.375	28	46.37	254	10.347	25	17.37	1
30	6.453	52	72.18	153	32.548	93	58.12	191	61.347	78	48.91	225	10.372	25	17.36	9
Feb. 9	6.401	94	73.71	127	32.455	172	60.03	171	61.269	122	51.16	190	10.347	73	17.45	16
19	6.307	129	74.98	99	32.283	237	61.74	143	61.147	160	53.06	153	10.274	111	17.61	19
März 1	6.178	154	75.97	70	32.046	288	63.17	110	60.987	187	54.59	114	10.163	142	17.80	21
11	6.024	171	76.67	41	31.758	320	64.27	71	60.800	205	55.73	73	10.021	162	18.01	19
21	5.853	177	77.08	13	31.438	334	64.98	31	60.595	213	56.46	31	9.859	170	18.20	16
31	5.676	173	77.21	15	31.104	330	65.29	11	60.382	211	56.77	10	9.689	168	18.36	12
Apr. 10	5.503	161	77.06	43	30.774	306	65.18	52	60.171	198	56.67	50	9.521	155	18.48	8
20	5.342	140	76.63	69	30.468	269	64.66	89	59.973	177	56.17	88	9.366	134	18.56	4
30	5.202	112	75.94	93	30.199	219	63.77	123	59.796	150	55.29	124	9.232	105	18.60	0
Mai 10	5.090	80	75.01	116	29.980	157	62.54	152	59.646	116	54.05	158	9.127	71	18.60	2
20	5.010	44	73.85	137	29.823	91	61.02	175	59.530	79	52.47	187	9.056	32	18.58	4
30	4.966	7	72.48	154	29.732	18	59.27	193	59.451	40	50.60	212	9.024	7	18.54	4
Juni 9	4.959	31	70.94	167	29.714	54	57.34	204	59.411	2	48.48	232	9.031	48	18.50	3
19	4.990	68	69.27	176	29.768	126	55.30	210	59.413	43	46.16	245	9.079	87	18.47	3
29	5.058	105	67.51	181	29.894	195	53.20	212	59.456	84	43.71	251	9.166	125	18.44	3
Juli 9	5.163	138	65.70	179	30.089	260	51.08	207	59.540	122	41.20	251	9.291	159	18.41	3
19	5.301	169	63.91	172	30.349	319	49.01	198	59.662	158	38.69	243	9.450	191	18.38	5
29	5.470	198	62.19	159	30.668	372	47.03	187	59.820	192	36.26	225	9.641	220	18.33	8
Aug. 8	5.668	222	60.60	138	31.040	420	45.16	171	60.012	222	34.01	201	9.861	245	18.25	12
18	5.890	244	59.22	113	31.460	459	43.45	153	60.234	249	32.00	168	10.106	266	18.13	19
28	6.134	262	58.09	82	31.919	494	41.92	132	60.483	272	30.32	128	10.372	286	17.94	27
Sept. 7	6.396	278	57.27	46	32.413	520	40.60	108	60.755	292	29.04	83	10.658	301	17.67	36
17	6.674	290	56.81	6	32.933	542	39.52	84	61.047	306	28.21	32	10.959	314	17.31	46
27	6.964	298	56.75	34	33.475	555	38.68	56	61.353	317	27.89	21	11.273	323	16.85	56
Okt. 7	7.262	302	57.09	74	34.030	560	38.12	28	61.670	321	28.10	74	11.596	330	16.29	65
17	7.564	301	57.83	114	34.590	558	37.84	2	61.991	320	28.84	127	11.926	332	15.64	72
27	7.865	295	58.97	149	35.148	545	37.86	34	62.311	312	30.11	176	12.258	328	14.92	76
Nov. 6	8.160	283	60.46	180	35.693	523	38.20	65	62.623	297	31.87	218	12.586	318	14.16	77
16	8.443	263	62.26	204	36.216	486	38.85	97	62.920	274	34.05	255	12.904	302	13.39	75
26	8.706	238	64.30	221	36.702	439	39.82	126	63.194	243	36.60	281	13.206	278	12.64	69
Dez. 6	8.944	204	66.51	230	37.141	379	41.08	154	63.437	204	39.41	299	13.484	245	11.95	60
16	9.148	166	68.81	231	37.520	307	42.62	175	63.641	160	42.40	305	13.729	206	11.35	48
26	9.314	120	71.12	225	37.827	226	44.37	193	63.801	111	45.45	304	13.935	161	10.87	35
35*)	[34] 9.434		73.37		[34] 38.053		46.30		63.912		48.49		14.096		10.52	
Mittl. Ort	4.627		72.47		28.879		46.46		59.513		47.46		8.212		12.59	
sec δ, tg δ	1.022		−0.212		1.915		+1.633		1.142		−0.552		1.069		+0.377	
a, a'	+2.8		−4.4		+5.2		−4.5		+2.4		−4.8		+3.6		−5.2	
b, b'	0.00		−0.98		−0.02		−0.97		+0.01		−0.97		−0.01		−0.97	

*) Bei Stern 268) und 269) lies Dez. 36

Scheinbare Sternörter 1933

Tag	271) γ Canis maj. AR.		Dekl.		273) δ Canis maj. AR.		Dekl.		274) 63 Aurigae AR.		Dekl.		277) λ Geminorum AR.		Dekl.	
1933	7h 0m		−15° 31′		7h 5m		−26° 16′		7h 7m		+39° 25′		7h 14m		+16° 39′	
Jan. 1	6 45.363	98	52.91	237	7 41.702	92	61.82	288	7 5.409	161	58.23	90	9 16.512	141	50.22	55
10	45.461	49	55.28	221	41.794	40	64.70	272	5.570	99	59.13	101	16.653	90	49.67	41
20	45.510	1	57.49	200	41.834	13	67.42	250	5.669	34	60.14	108	16.743	38	49.26	26
30	45.509	49	59.49	174	41.821	63	69.92	222	5.703	27	61.22	109	16.781	13	49.00	13
Feb. 9	45.460	91	61.23	146	41.758	108	72.14	188	5.676	85	62.31	104	16.768	60	48.87	3
19	45.369	128	62.69	117	41.650	145	74.02	153	5.591	133	63.35	93	16.708	100	48.84	5
März 1	45.241	155	63.86	84	41.505	175	75.55	116	5.458	171	64.28	78	16.608	132	48.89	11
11	45.086	173	64.70	52	41.330	194	76.71	76	5.287	197	65.06	58	16.476	153	49.00	15
21	44.913	180	65.22	21	41.136	203	77.47	37	5.090	209	65.64	36	16.323	164	49.15	16
31	44.733	179	65.43	10	40.933	203	77.84	2	4.881	208	66.00	13	16.159	164	49.31	16
Apr. 10	44.554	167	65.33	40	40.730	191	77.82	41	4.673	196	66.13	11	15.995	154	49.47	16
20	44.387	148	64.93	69	40.539	172	77.41	78	4.477	171	66.02	33	15.841	135	49.63	15
30	44.239	122	64.24	96	40.367	147	76.63	112	4.306	138	65.69	54	15.706	109	49.78	14
Mai 10	44.117	90	63.28	122	40.220	115	75.51	144	4.168	98	65.15	72	15.597	78	49.92	15
20	44.027	56	62.06	144	40.105	80	74.07	174	4.070	53	64.43	87	15.519	43	50.07	15
30	43.971	19	60.62	164	40.025	41	72.33	198	4.017	6	63.56	98	15.476	5	50.22	16
Juni 9	43.952	19	58.98	178	39.984	2	70.35	217	4.011	43	62.58	107	15.471	34	50.38	16
19	43.971	56	57.20	189	39.982	37	68.18	232	4.054	91	61.51	111	15.505	71	50.54	17
29	44.027	93	55.31	195	40.019	77	65.86	239	4.145	136	60.40	114	15.576	108	50.71	16
Juli 9	44.120	127	53.36	194	40.096	114	63.47	238	4.281	179	59.26	115	15.684	141	50.87	15
19	44.247	159	51.42	187	40.210	150	61.09	232	4.460	219	58.11	114	15.825	173	51.02	12
29	44.406	188	49.55	173	40.360	182	58.77	217	4.679	254	56.97	110	15.998	201	51.14	7
Aug. 8	44.594	215	47.82	152	40.542	213	56.60	193	4.933	285	55.87	106	16.199	227	51.21	0
18	44.809	238	46.30	126	40.755	239	54.67	162	5.218	313	54.81	101	16.426	249	51.21	10
28	45.047	259	45.04	93	40.994	263	53.05	125	5.531	337	53.80	96	16.675	270	51.11	21
Sept. 7	45.306	276	44.11	55	41.257	283	51.80	82	5.868	357	52.84	89	16.945	287	50.90	34
17	45.582	289	43.56	14	41.540	300	50.98	33	6.225	374	51.95	81	17.232	301	50.56	48
27	45.871	299	43.42	29	41.840	311	50.65	18	6.599	386	51.14	73	17.533	313	50.08	62
Okt. 7	46.170	305	43.71	73	42.151	317	50.83	70	6.985	394	50.41	62	17.846	322	49.46	75
17	46.475	306	44.44	116	42.468	318	51.53	120	7.379	397	49.79	49	18.168	325	48.71	87
27	46.781	300	45.60	155	42.786	313	52.73	168	7.776	393	49.30	35	18.493	324	47.84	95
Nov. 6	47.081	289	47.15	189	43.099	299	54.41	211	8.169	383	48.95	17	18.817	318	46.89	99
16	47.370	271	49.04	216	43.398	279	56.52	246	8.552	363	48.78	1	19.135	303	45.90	101
26	47.641	245	51.20	236	43.677	251	58.98	272	8.915	335	48.79	21	19.438	281	44.89	97
Dez. 6	47.886	212	53.56	247	43.928	214	61.70	290	9.250	297	49.00	42	19.719	251	43.92	90
16	48.098	172	56.03	251	44.142	172	64.60	297	9.547	251	49.42	61	19.970	214	43.02	79
26	48.270	127	58.54	246	44.314	124	67.57	295	9.798	196	50.03	78	20.184	170	42.23	67
36	48.397		61.00		44.438		70.52		9.994		50.81		20.354		41.56	
Mittl. Ort	43.673		59.28		39.979		68.74		3.042		53.94		14.647		45.61	
sec δ, tg δ	1.038		−0.278		1.115		−0.494		1.295		+0.822		1.044		+0.299	
a, *a′*	+2.7		−5.3		+2.4		−5.7		+4.1		−5.8		+3.5		−6.4	
b, *b′*	0.00		−0.97		+0.01		−0.96		−0.02		−0.96		−0.01		−0.95	

Tag	278) π Argus				279) δ Geminorum				281) δ Volantis				280) 19 Lyncis sq.			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$7^h 14^m$		$-36° 58'$		$7^h 16^m$		$+22° 6'$		$7^h 16^m$		$-67° 49'$		$7^h 17^m$		$+55° 24'$	
Jan. 1	48.339	91	26.84	331	9.388	149	30.61	21	55.40	2	55.50	381	27.713	211	38.07	178
10	9 48.430	32	30.15	316	9 9.537	96	30.40	7	10 55.42	9	59.31	371	10 27.924	126	39.85	189
20	48.462	25	33.31	295	9.633	42	30.33	7	55.33	20	63.02	352	28.050	42	41.74	193
30	48.437	80	36.26	265	9.675	11	30.40	17	55.13	31	66.54	323	28.092	42	43.67	189
Feb. 9	48.357	130	38.91	230	9.664	60	30.57	24	54.82	40	69.77	287	28.050	119	45.56	175
19	48.227	172	41.21	191	9.604	101	30.81	29	54.42	47	72.64	244	27.931	185	47.31	155
März 1	48.055	205	43.12	149	9.503	135	31.10	29	53.95	53	75.08	198	27.746	239	48.86	127
11	47.850	227	44.61	104	9.368	157	31.39	28	53.42	58	77.06	147	27.507	276	50.13	95
21	47.623	238	45.65	59	9.211	169	31.67	24	52.84	60	78.53	95	27.231	297	51.08	57
31	47.385	240	46.24	13	9.042	169	31.91	18	52.24	61	79.48	41	26.934	300	51.65	19
Apr. 10	47.145	230	46.37	31	8.873	159	32.09	12	51.63	59	79.89	13	26.634	287	51.84	20
20	46.915	212	46.06	75	8.714	141	32.21	5	51.04	57	79.76	65	26.347	259	51.64	57
30	46.703	187	45.31	117	8.573	114	32.26	0	50.47	53	79.11	116	26.088	219	51.07	92
Mai 10	46.516	154	44.14	155	8.459	81	32.26	4	49.94	47	77.95	163	25.869	168	50.15	122
20	46.362	117	42.59	190	8.378	45	32.22	8	49.47	41	76.32	207	25.701	111	48.93	149
30	46.245	77	40.69	220	8.333	6	32.14	11	49.06	33	74.25	244	25.590	48	47.44	169
Juni 9	46.168	34	38.49	243	8.327	34	32.03	13	48.73	24	71.81	277	25.542	15	45.75	186
19	46.134	9	36.06	262	8.361	72	31.90	15	48.49	16	69.04	300	25.557	80	43.89	197
29	46.143	53	33.44	272	8.433	110	31.75	16	48.33	6	66.04	317	25.637	143	41.92	202
Juli 9	46.196	95	30.72	274	8.543	145	31.59	17	48.27	4	62.87	322	25.780	203	39.90	204
19	46.291	136	27.98	268	8.688	178	31.42	20	48.31	13	59.65	320	25.983	258	37.86	201
29	46.427	175	25.30	254	8.866	207	31.22	24	48.44	22	56.45	307	26.241	309	35.85	194
Aug. 8	46.602	211	22.76	229	9.073	234	30.98	28	48.66	31	53.38	282	26.550	355	33.91	184
18	46.813	245	20.47	197	9.307	257	30.70	35	48.97	40	50.56	249	26.905	396	32.07	171
28	47.058	273	18.50	156	9.564	278	30.35	43	49.37	47	48.07	206	27.301	432	30.36	155
Sept. 7	47.331	299	16.94	109	9.842	296	29.92	51	49.84	53	46.01	154	27.733	461	28.81	137
17	47.630	319	15.85	56	10.138	312	29.41	60	50.37	58	44.47	95	28.194	487	27.44	116
27	47.949	335	15.29	1	10.450	323	28.81	68	50.95	61	43.52	31	28.681	505	26.28	93
Okt. 7	48.284	342	15.30	59	10.773	332	28.13	76	51.56	63	43.21	34	29.186	518	25.35	67
17	48.626	345	15.89	117	11.105	337	27.37	81	52.19	62	43.55	100	29.704	522	24.68	39
27	48.971	338	17.06	172	11.442	337	26.56	84	52.81	59	44.55	166	30.226	518	24.29	10
Nov. 6	49.309	324	18.78	222	11.779	329	25.72	84	53.40	55	46.21	224	30.744	505	24.19	21
16	49.633	300	21.00	264	12.108	314	24.88	80	53.95	49	48.45	277	31.249	478	24.40	54
26	49.933	268	23.64	297	12.422	293	24.08	72	54.44	41	51.22	321	31.727	441	24.94	86
Dez. 6	50.201	227	26.61	321	12.715	262	23.36	60	54.85	32	54.43	352	32.168	390	25.80	115
16	50.428	179	29.82	334	12.977	223	22.76	48	55.17	21	57.95	375	32.558	329	26.95	142
26	50.607	126	33.16	336	13.200	178	22.28	33	55.38	9	61.70	384	32.887	256	28.37	165
36	50.733		36.52		13.378		21.95		55.47		65.54		33.143		30.02	
Mittl. Ort	46.535		34.60		7.441		26.36		52.28		65.07		24.509		34.95	
sec δ, tg δ	1.252		−0.753		1.079		+0.406		2.651		−2.455		1.761		+1.450	
a, a'	+2.1		−6.4		+3.6		−6.5		0.0		−6.6		+4.9		−6.6	
b, b'	+0.02		−0.95		−0.01		−0.95		+0.05		−0.94		−0.03		−0.94	

Scheinbare Sternörter 1933

Tag	282) ι Geminorum AR.	Δ	Dekl.	Δ	285) β Canis min. AR.	Δ	Dekl.	Δ	284) Grb 1308 AR.	Δ	Dekl.	Δ	286) ρ Geminorum AR.	Δ	Dekl.	Δ
1933	$7^h 21^m$		$+27° 55'$		$7^h 23^m$		$+8° 25'$		$7^h 23^m$		$+68° 36'$		$7^h 24^m$		$+31° 55'$	
Jan. 1	36.173	162	62.03	13	32.888	143	37.30	109	60.48	29	20.79	239	50.464	170	13.44	38
11	36.335	106	62.16	28	33.031	93	36.21	94	60.77	17	23.18	251	50.634	114	13.82	53
20	36.441	49	62.44	41	33.124	42	35.27	77	60.94	4	25.69	252	50.748	54	14.35	65
30	36.490	$\overline{6}$	62.85	49	33.166	$\overline{7}$	34.50	61	60.98	$\overline{9}$	28.21	244	50.802	$\overline{3}$	15.00	72
Feb. 9	36.484	58	63.34	54	33.159	54	33.89	44	60.89	21	30.65	226	50.799	58	15.72	75
19	36.426	103	63.88	54	33.105	93	33.45	29	60.68	31	32.91	197	50.741	104	16.47	72
März 1	36.323	138	64.42	51	33.012	124	33.16	16	60.37	39	34.88	162	50.637	142	17.19	66
11	36.185	163	64.93	43	32.888	147	33.00	4	59.98	45	36.50	118	50.495	168	17.85	55
21	36.022	176	65.36	33	32.741	158	32.96	$\overline{5}$	59.53	49	37.68	72	50.327	183	18.40	41
31	35.846	178	65.69	22	32.583	159	33.01	15	59.04	50	38.40	23	50.144	186	18.81	26
Apr. 10	35.668	169	65.91	10	32.424	151	33.16	22	58.54	48	38.63	$\overline{27}$	49.958	177	19.07	9
20	35.499	151	66.01	$\overline{3}$	32.273	135	33.38	29	58.06	45	38.36	74	49.781	158	19.16	$\overline{7}$
30	35.348	123	65.98	14	32.138	112	33.67	36	57.61	39	37.62	118	49.623	131	19.09	22
Mai 10	35.225	90	65.84	24	32.026	82	34.03	42	57.22	32	36.44	158	49.492	96	18.87	36
20	35.135	52	65.60	33	31.944	49	34.45	48	56.90	23	34.86	192	49.396	58	18.51	48
30	35.083	12	65.27	39	31.895	15	34.93	54	56.67	14	32.94	220	49.338	17	18.03	58
Juni 9	35.071	28	64.88	44	31.880	$\overline{22}$	35.47	58	56.53	4	30.74	241	49.321	$\overline{26}$	17.45	65
19	35.099	70	64.44	49	31.902	58	36.05	61	56.49	$\overline{6}$	28.33	256	49.347	68	16.80	70
29	35.169	109	63.95	52	31.960	93	36.66	62	56.55	16	25.77	264	49.415	109	16.10	75
Juli 9	35.278	146	63.43	54	32.053	125	37.28	60	56.71	25	23.13	265	49.524	148	15.35	78
19	35.424	180	62.89	56	32.178	155	37.88	56	56.96	34	20.48	262	49.672	183	14.57	80
29	35.604	211	62.33	58	32.333	184	38.44	48	57.30	42	17.86	252	49.855	216	13.77	81
Aug. 8	35.815	240	61.75	61	32.517	209	38.92	37	57.72	50	15.34	238	50.071	246	12.96	83
18	36.055	265	61.14	65	32.726	233	39.29	24	58.22	57	12.96	219	50.317	273	12.13	83
28	36.320	287	60.49	68	32.959	253	39.53	6	58.79	63	10.77	196	50.590	296	11.30	85
Sept. 7	36.607	307	59.81	72	33.212	271	39.59	$\overline{14}$	59.42	68	8.81	170	50.886	317	10.45	86
17	36.914	323	59.09	76	33.483	287	39.45	35	60.10	72	7.11	139	51.203	335	9.59	86
27	37.237	337	58.33	79	33.770	299	39.10	57	60.82	75	5.72	107	51.538	350	8.73	84
Okt. 7	37.574	347	57.54	80	34.069	309	38.53	79	61.57	77	4.65	70	51.888	360	7.89	82
17	37.921	353	56.74	80	34.378	315	37.74	99	62.34	78	3.95	31	52.248	366	7.07	78
27	38.274	353	55.94	76	34.693	315	36.75	116	63.12	77	3.64	$\overline{8}$	52.614	367	6.29	70
Nov. 6	38.627	346	55.18	69	35.008	310	35.59	129	63.89	75	3.72	50	52.981	361	5.59	59
16	38.973	331	54.49	60	35.318	296	34.30	137	64.64	70	4.22	92	53.342	346	5.00	46
26	39.304	310	53.89	48	35.614	277	32.93	140	65.34	65	5.14	131	53.688	323	4.54	30
Dez. 6	39.614	278	53.41	32	35.891	248	31.53	139	65.99	57	6.45	168	54.011	292	4.24	13
16	39.892	239	53.09	16	36.139	212	30.14	131	66.56	47	8.13	200	54.303	251	4.11	7
26	40.131	191	52.93	$\overline{1}$	36.351	170	28.83	120	67.03	36	10.13	225	54.554	202	4.18	25
36	40.322		52.94		36.521		27.63		67.39		12.38		54.756		4.43	
Mittl. Ort	34.116		58.37		31.123		32.61		55.59		18.43		48.313		10.19	
sec δ, tg δ	1.132		+0.530		1.011		+0.148		2.741		+2.552		1.178		+0.623	
a, *a'*	+3.7		−7.0		+3.3		−7.1		+6.3		−7.2		+3.8		−7.2	
b, *b'*	−0.01		−0.94		0.00		−0.93		−0.06		−0.93		−0.02		−0.93	

Obere Kulmination Greenwich

Tag	287) α Geminorum ¹) AR.		Dekl.		289) 25 Monocerotis AR.		Dekl.		291) α Canis min. ²) AR.		Dekl.		292) 24 Lyncis AR.		Dekl.	
1933	7ʰ 30ᵐ		+32° 2′		7ʰ 33ᵐ		−3° 57′		7ʰ 35ᵐ		+5° 23′		7ʰ 37ᵐ		+58° 51′	
Jan. 1	21.766ˢ	177	18.13″	35	58.522ˢ	142	30.98″	186	49.545ˢ	146	57.38″	134	24.473ˢ	257	70.34″	186
11	21.943	119	18.48	52	58.664	93	32.84	171	49.691	98	56.04	119	24.730	167	72.20	203
20	22.062	59	19.00	64	58.757	42	34.55	152	49.789	47	54.85	100	24.897	74	74.23	211
30	22.121	2	19.64	73	58.799	6	36.07	130	49.836	3	53.85	81	24.971	18	76.34	210
Feb. 9	22.123	53	20.37	76	58.793	52	37.37	108	49.833	48	53.04	62	24.953	105	78.44	199
19	22.070	100	21.13	74	58.741	91	38.45	85	49.785	89	52.42	45	24.848	183	80.43	179
März 1	21.970	139	21.87	68	58.650	123	39.30	62	49.696	121	51.97	29	24.665	245	82.22	153
11	21.831	167	22.55	58	58.527	146	39.92	39	49.575	144	51.68	13	24.420	293	83.75	120
21	21.664	182	23.13	44	58.381	158	40.31	17	49.431	156	51.55	1	24.127	321	84.95	81
31	21.482	186	23.57	29	58.223	162	40.48	3	49.275	159	51.54	10	23.806	333	85.76	40
Apr. 10	21.296	179	23.86	12	58.061	155	40.45	23	49.116	153	51.64	21	23.473	325	86.16	1
20	21.117	160	23.98	5	57.906	141	40.22	42	48.963	138	51.85	31	23.148	302	86.15	43
30	20.957	134	23.93	21	57.765	120	39.80	60	48.825	116	52.16	40	22.846	264	85.72	82
Mai 10	20.823	102	23.72	35	57.645	93	39.20	76	48.709	88	52.56	49	22.582	215	84.90	117
20	20.721	63	23.37	47	57.552	63	38.44	92	48.621	56	53.05	56	22.367	157	83.73	149
30	20.658	22	22.90	58	57.489	30	37.52	104	48.565	23	53.61	62	22.210	93	82.24	175
Juni 9	20.636	19	22.32	67	57.459	5	36.48	115	48.542	12	54.23	68	22.117	25	80.49	196
19	20.655	62	21.65	72	57.464	40	35.33	123	48.554	47	54.91	70	22.092	43	78.53	212
29	20.717	102	20.93	77	57.504	73	34.10	126	48.601	82	55.61	72	22.135	112	76.41	222
Juli 9	20.819	141	20.16	81	57.577	105	32.84	126	48.683	114	56.33	70	22.247	177	74.19	227
19	20.960	177	19.35	83	57.682	136	31.58	122	48.797	144	57.03	65	22.424	240	71.92	228
29	21.137	210	18.52	86	57.818	165	30.36	111	48.941	172	57.68	57	22.664	298	69.64	223
Aug. 8	21.347	240	17.66	87	57.983	191	29.25	97	49.113	198	58.25	44	22.962	351	67.41	215
18	21.587	268	16.79	89	58.174	216	28.28	77	49.311	222	58.69	28	23.313	400	65.26	203
28	21.855	292	15.90	91	58.390	237	27.51	53	49.533	244	58.97	10	23.713	442	63.23	188
Sept. 7	22.147	313	14.99	91	58.627	258	26.98	24	49.777	262	59.07	13	24.155	481	61.35	170
17	22.460	332	14.08	92	58.885	275	26.74	8	50.039	279	58.94	37	24.636	512	59.65	147
27	22.792	347	13.16	91	59.160	290	26.82	41	50.318	294	58.57	61	25.148	538	58.18	123
Okt. 7	23.139	359	12.25	89	59.450	301	27.23	75	50.612	304	57.96	87	25.686	557	56.95	94
17	23.498	366	11.36	83	59.751	308	27.98	107	50.916	311	57.09	109	26.243	567	56.01	64
27	23.864	368	10.53	75	60.059	309	29.05	137	51.227	312	56.00	130	26.810	567	55.37	31
Nov. 6	24.232	362	9.78	65	60.368	305	30.42	162	51.539	308	54.70	145	27.377	558	55.06	4
16	24.594	349	9.13	51	60.673	293	32.04	181	51.847	297	53.25	156	27.935	534	55.10	42
26	24.943	328	8.62	35	60.966	273	33.85	196	52.144	277	51.69	162	28.469	498	55.52	77
Dez. 6	25.271	296	8.27	16	61.239	245	35.81	201	52.421	250	50.07	161	28.967	447	56.29	112
16	25.567	255	8.11	3	61.484	211	37.82	202	52.671	216	48.46	156	29.414	383	57.41	144
26	25.822	208	8.14	22	61.695	169	39.84	194	52.887	173	46.90	145	29.797	306	58.85	171
36	26.030		8.36		61.864		41.78		53.060		45.45		30.103		60.56	
Mittl. Ort	19.615		15.26		56.858		36.37		47.817		52.96		20.954		69.20	
sec δ, tg δ	1.180		+0.626		1.002		−0.069		1.004		+0.095		1.934		+1.656	
a, a′	+3.8		−7.7		+3.0		−8.0		+3.2		−8.1		+5.1		−8.3	
b, b′	−0.02		−0.92		0.00		−0.92		0.00		−0.91		−0.05		−0.91	

¹) AR. der Mitte; Dekl. des folgenden helleren Sterns.

²) Ort des hellen Sterns; die jährliche Parallaxe (0.″33) ist bereits berücksichtigt.

Scheinbare Sternörter 1933

Tag	294) κ Geminorum AR.		Dekl.		295) β Geminorum AR.		Dekl.	
1933	7h 40m		+24° 33′		7h 41m		+28° 11′	
Jan. 1	26.341	176	39.37	15	15.218	181	24.73	7
11	16 26.517	124	39.22	2	16 15.399	126	24.80	25
20	26.641	68	39.24	18	15.525	70	25.05	40
30	26.709	12	39.42	30	15.595	12	25.45	52
Feb. 9	26.721	38	39.72	40	15.607	41	25.97	58
19	26.683	85	40.12	44	15.566	88	26.55	61
März 1	26.598	121	40.56	46	15.478	126	27.16	60
11	26.477	149	41.02	43	15.352	155	27.76	53
21	26.328	165	41.45	37	15.197	172	28.29	44
31	26.163	170	41.82	30	15.025	177	28.73	33
Apr. 10	25.993	165	42.12	21	14.848	172	29.06	20
20	25.828	149	42.33	11	14.676	156	29.26	7
30	25.679	126	42.44	2	14.520	133	29.33	6
Mai 10	25.553	97	42.46	7	14.387	103	29.27	18
20	25.456	64	42.39	14	14.284	68	29.09	29
30	25.392	26	42.25	21	14.216	30	28.80	37
Juni 9	25.366	12	42.04	27	14.186	9	28.43	45
19	25.378	50	41.77	32	14.195	49	27.98	52
29	25.428	87	41.45	35	14.244	87	27.46	57
Juli 9	25.515	123	41.10	40	14.331	124	26.89	61
19	25.638	156	40.70	44	14.455	159	26.28	66
29	25.794	187	40.26	49	14.614	191	25.62	70
Aug. 8	25.981	216	39.77	54	14.805	220	24.92	74
18	26.197	242	39.23	61	15.025	247	24.18	78
28	26.439	265	38.62	68	15.272	272	23.40	84
Sept. 7	26.704	287	37.94	76	15.544	294	22.56	88
17	26.991	306	37.18	83	15.838	313	21.68	92
27	27.297	322	36.35	89	16.151	330	20.76	96
Okt. 7	27.619	335	35.46	95	16.481	344	19.80	97
17	27.954	343	34.51	98	16.825	352	18.83	96
27	28.297	347	33.53	99	17.177	356	17.87	93
Nov. 6	28.644	345	32.54	94	17.533	353	16.94	86
16	28.989	333	31.60	88	17.886	342	16.08	75
26	29.322	314	30.72	77	18.228	323	15.33	61
Dez. 6	29.636	287	29.95	63	18.551	294	14.72	44
16	29.923	250	29.32	46	18.845	257	14.28	26
26	30.173	206	28.86	28	19.102	211	14.02	6
36	30.379		28.58		19.313		13.96	
Mittl. Ort	24.363		36.65		13.165		22.34	
sec δ, tg δ	1.099		+0.457		1.135		+0.536	
a, *a′*	+3.6		−8.5		+3.7		−8.6	
b, *b′*	−0.01		−0.91		−0.02		−0.90	

Tag	297) ζ Volantis AR.		Dekl.		296) π Geminorum AR.		Dekl.	
1933	7h 42m		−72° 26′		7h 43m		+33° 34′	
Jan. 1	42.67	8	32.53	384	13.655	193	56.05	40
11	16 42.75	6	36.37	382	16 13.848	135	56.45	58
20	42.69	20	40.19	369	13.983	76	57.03	73
30	42.49	33	43.88	347	14.059	15	57.76	82
Feb. 9	42.16	45	47.35	316	14.074	40	58.58	87
19	41.71	55	50.51	279	14.034	92	59.45	85
März 1	41.16	63	53.30	236	13.942	133	60.30	80
11	40.53	70	55.66	188	13.809	162	61.10	69
21	39.83	74	57.54	138	13.647	181	61.79	55
31	39.09	75	58.92	86	13.466	188	62.34	38
Apr. 10	38.34	76	59.78	32	13.278	182	62.72	19
20	37.58	74	60.10	21	13.096	167	62.91	1
30	36.84	70	59.89	74	12.929	142	62.92	18
Mai 10	36.14	65	59.15	124	12.787	112	62.74	34
20	35.49	58	57.91	170	12.675	75	62.40	49
30	34.91	50	56.21	213	12.600	35	61.91	61
Juni 9	34.41	40	54.08	250	12.565	7	61.30	73
19	34.01	29	51.58	279	12.572	49	60.57	82
29	33.72	18	48.79	302	12.621	89	59.75	88
Juli 9	33.54	6	45.77	314	12.710	128	58.87	93
19	33.48	6	42.63	319	12.838	166	57.94	97
29	33.54	18	39.44	312	13.004	199	56.97	101
Aug. 8	33.72	30	36.32	295	13.203	231	55.96	103
18	34.02	41	33.37	267	13.434	260	54.93	105
28	34.43	51	30.70	230	13.694	286	53.88	106
Sept. 7	34.94	60	28.40	184	13.980	309	52.82	107
17	35.54	68	26.56	128	14.289	331	51.75	107
27	36.22	73	25.28	67	14.620	348	50.68	105
Okt. 7	36.95	76	24.61	2	14.968	362	49.63	101
17	37.71	77	24.59	65	15.330	372	48.62	95
27	38.48	75	25.24	130	15.702	376	47.67	85
Nov. 6	39.23	71	26.54	194	16.078	373	46.82	73
16	39.94	64	28.48	250	16.451	361	46.09	57
26	40.58	55	30.98	299	16.812	342	45.52	38
Dez. 6	41.13	43	33.97	337	17.154	311	45.14	18
16	41.56	31	37.34	365	17.465	273	44.96	5
26	41.87	18	40.99	382	17.738	224	45.01	25
36	42.05		44.81		17.962		45.26	
Mittl. Ort	39.17		43.84		11.470		54.19	
sec δ, tg δ	3.316		−3.161		1.200		+0.664	
a, *a′*	−0.7		−8.7		+3.9		−8.7	
b, *b′*	+0.09		−0.90		−0.02		−0.90	

Tag	300) Grb 1374				303) χ Argus				305) χ Geminorum				306) ζ Argus			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	7h 52m		+74° 5′		7h 55m		−52° 47′		7h 59m		+27° 58′		8h 1m		−39° 48′	
Jan. 1	19.25s	45	58.77″	248	6.547s	134	56.19″	375	26.457s	201	62.28″	2	15.370s	148	39.51″	347
11	19.70	28	61.25	266	6.681	59	59.94	372	26.658	148	62.26	18	15.518	88	42.98	343
20*)	[19] 19.98	12	63.91	274	[19] 6.740	16	63.66	359	[20] 26.806	90	62.44	36	[21] 15.606	27	46.41	327
30	20.10	5	66.65	272	6.724	88	67.25	335	26.896	32	62.80	50	15.633	33	49.68	304
Feb. 9	20.05	22	69.37	257	6.636	153	70.60	305	26.928	22	63.30	59	15.600	89	52.72	275
19	19.83	36	71.94	232	6.483	212	73.65	268	26.906	71	63.89	65	15.511	137	55.47	239
März 1	19.47	48	74.26	199	6.271	259	76.33	225	26.835	111	64.54	65	15.374	178	57.86	200
11	18.99	57	76.25	156	6.012	296	78.58	179	26.724	143	65.19	61	15.196	208	59.86	158
21	18.42	64	77.81	109	5.716	320	80.37	131	26.581	163	65.80	53	14.988	229	61.44	112
31	17.78	68	78.90	56	5.396	331	81.68	80	26.418	172	66.33	43	14.759	239	62.56	67
Apr. 10	17.10	67	79.46	4	5.065	332	82.48	29	26.246	169	66.76	30	14.520	239	63.23	21
20	16.43	64	79.50	49	4.733	320	82.77	22	26.077	158	67.06	17	14.281	229	63.44	25
30	15.79	59	79.01	99	4.413	300	82.55	72	25.919	138	67.23	3	14.052	212	63.19	69
Mai 10	15.20	51	78.02	146	4.113	271	81.83	120	25.781	111	67.26	10	13.840	187	62.50	111
20	14.69	42	76.56	186	3.842	233	80.63	164	25.670	78	67.16	22	13.653	158	61.39	150
30	14.27	30	74.70	222	3.609	191	78.99	203	25.592	44	66.94	33	13.495	122	59.89	186
Juni 9	13.97	18	72.48	250	3.418	143	76.96	238	25.548	5	66.61	43	13.373	85	58.03	216
19	13.79	5	69.98	272	3.275	92	74.58	267	25.543	32	66.18	51	13.288	44	55.87	240
29	13.74	8	67.26	286	3.183	37	71.91	286	25.575	69	65.67	58	13.244	3	53.47	258
Juli 9	13.82	20	64.40	294	3.146	18	69.05	299	25.644	105	65.09	64	13.241	39	50.89	268
19	14.02	32	61.46	296	3.164	74	66.06	302	25.749	141	64.45	71	13.280	82	48.21	270
29	14.34	45	58.50	290	3.238	130	63.04	295	25.890	172	63.74	77	13.362	124	45.51	262
Aug. 8	14.79	55	55.60	280	3.368	184	60.09	279	26.062	203	62.97	82	13.486	165	42.89	246
18	15.34	65	52.80	264	3.552	237	57.30	251	26.265	231	62.15	89	13.651	203	40.43	220
28	15.99	74	50.16	242	3.789	285	54.79	215	26.496	257	61.26	95	13.854	240	38.23	186
Sept. 7	16.73	83	47.74	216	4.074	330	52.64	169	26.753	282	60.31	101	14.094	275	36.37	143
17	17.56	89	45.58	186	4.404	367	50.95	116	27.035	303	59.30	106	14.369	304	34.94	93
27	18.45	94	43.72	151	4.771	398	49.79	56	27.338	323	58.24	110	14.673	329	34.01	39
Okt. 7	19.39	98	42.21	112	5.169	419	49.23	6	27.661	339	57.14	112	15.002	348	33.62	20
17	20.37	101	41.09	70	5.588	431	49.29	72	28.000	352	56.02	113	15.350	360	33.82	80
27	21.38	101	40.39	26	6.019	430	50.01	135	28.352	358	54.89	109	15.710	364	34.62	138
Nov. 6	22.39	99	40.13	21	6.449	418	51.36	196	28.710	359	53.80	102	16.074	358	36.00	193
16	23.38	94	40.34	68	6.867	393	53.32	250	29.069	351	52.78	90	16.432	343	37.93	242
26	24.32	88	41.02	114	7.260	355	55.82	296	29.420	334	51.88	76	16.775	316	40.35	283
Dez. 6	25.20	79	42.16	157	7.615	306	58.78	333	29.754	309	51.12	59	17.091	281	43.18	315
16	25.99	68	43.73	197	7.921	246	62.11	360	30.063	274	50.53	38	17.372	236	46.33	336
26	26.67	53	45.70	230	8.167	179	65.71	373	30.337	230	50.15	17	17.608	183	49.69	348
36	27.20		48.00		8.346		69.44		30.567		49.98		17.791		53.17	
Mittl. Ort	12.79		59.43		4.583		66.67		24.430		61.07		13.690		48.86	
sec δ, tg δ	3.650		+3.510		1.654		−1.318		1.132		+0.531		1.302		−0.834	
a, a′	+7.2		−9.4		+1.5		−9.6		+3.7		−10.0		+2.1		−10.1	
b, b′	−0.11		−0.88		+0.04		−0.88		−0.02		−0.87		+0.03		−0.86	

*) Bei Stern 306) lies Jan. 21

Scheinbare Sternörter 1933

Tag	307) 27 Lyncis				308) ι Navis				309) γ Argus				311) 20 Navis			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	8h 3m		+51° 41′		8h 4m		−24° 6′		8h 7m		−47° 8′		8h 10m		−15° 34′	
Jan. 1	28.569	266	64.66	135	42.974	159	29.11	293	29.789	155	8.13	366	16.767	169	60.81	256
11	28.835	191	66.01	158	43.133	107	32.04	283	29.944	88	11.79	363	16.936	120	63.37	245
21	[21] 29.026	113	67.59	173	[22] 43.240	54	34.87	267	[22] 30.032	21	15.42	351	[23] 17.056	68	65.82	227
30	29.139	34	69.32	181	43.294	1	37.54	244	30.053	45	18.93	330	17.124	18	68.09	205
Feb. 9	29.173	43	71.13	179	43.295	49	39.98	216	30.008	108	22.23	301	17.142	31	70.14	179
19	29.130	112	72.92	171	43.246	92	42.14	185	29.900	161	25.24	266	17.111	74	71.93	150
März 1	29.018	170	74.63	153	43.154	129	43.99	150	29.739	206	27.90	225	17.037	110	73.43	121
11	28.848	215	76.16	129	43.025	156	45.49	115	29.533	242	30.15	182	16.927	137	74.64	90
21	28.633	247	77.45	100	42.869	175	46.64	79	29.291	266	31.97	135	16.790	156	75.54	59
31	28.386	261	78.45	66	42.694	183	47.43	42	29.025	278	33.32	87	16.634	165	76.13	29
Apr. 10	28.125	263	79.11	31	42.511	183	47.85	5	28.747	280	34.19	37	16.469	165	76.42	1
20	27.862	249	79.42	6	42.328	174	47.90	30	28.467	272	34.56	11	16.304	157	76.41	30
30	27.613	223	79.36	41	42.154	157	47.60	64	28.195	256	34.45	59	16.147	141	76.11	57
Mai 10	27.390	188	78.95	74	41.997	135	46.96	97	27.939	231	33.86	106	16.006	120	75.54	83
20	27.202	144	78.21	105	41.862	108	45.99	127	27.708	199	32.80	148	15.886	94	74.71	107
30	27.058	95	77.16	132	41.754	78	44.72	154	27.509	162	31.32	187	15.792	66	73.64	128
Juni 9	26.963	42	75.84	155	41.676	46	43.18	176	27.347	122	29.45	221	15.726	35	72.36	146
19	26.921	12	74.29	172	41.630	11	41.42	194	27.225	78	27.24	250	15.691	2	70.90	160
29	26.933	67	72.57	187	41.619	24	39.48	207	27.147	31	24.74	271	15.689	30	69.30	170
Juli 9	27.000	120	70.70	197	41.643	58	37.41	212	27.116	17	22.03	283	15.719	63	67.60	173
19	27.120	171	68.73	204	41.701	92	35.29	212	27.133	66	19.20	287	15.782	94	65.87	171
29	27.291	220	66.69	205	41.793	126	33.17	204	27.199	114	16.33	283	15.876	124	64.16	163
Aug. 8	27.511	265	64.64	204	41.919	159	31.13	187	27.313	161	13.50	267	16.000	155	62.53	148
18	27.776	307	62.60	200	42.078	189	29.26	164	27.474	208	10.83	243	16.155	184	61.05	128
28	28.083	346	60.60	192	42.267	218	27.62	134	27.682	252	18.40	209	16.339	211	59.77	99
Sept. 7	28.429	381	58.68	182	42.485	246	26.28	96	27.934	292	6.31	165	16.550	236	58.78	66
17	28.810	412	56.86	168	42.731	270	25.32	53	28.226	327	4.66	115	16.786	260	58.12	28
27	29.222	440	55.18	150	43.001	291	24.79	6	28.553	357	3.51	58	17.046	280	57.84	13
Okt. 7	29.662	462	53.68	131	43.292	309	24.73	43	28.910	380	2.93	3	17.326	298	57.97	56
17	30.124	478	52.37	106	43.601	321	25.16	93	29.290	394	2.96	65	17.624	311	58.53	99
27	30.602	487	51.31	80	43.922	326	26.09	142	29.684	398	3.61	128	17.935	319	59.52	141
Nov. 6	31.089	485	50.51	49	44.248	325	27.51	185	30.082	392	4.89	187	18.254	318	60.93	177
16	31.574	474	50.02	16	44.573	315	29.36	224	30.474	373	6.76	240	18.572	311	62.70	210
26	32.048	451	49.86	18	44.888	296	31.60	255	30.847	345	9.16	286	18.883	295	64.80	234
Dez. 6	32.499	414	50.04	52	45.184	268	34.15	278	31.192	304	12.02	322	19.178	271	67.14	251
16	32.913	365	50.56	86	45.452	231	36.93	292	31.496	253	15.24	349	19.449	237	69.65	261
26	33.278	305	51.42	117	45.683	188	39.85	296	31.749	194	18.73	363	19.686	196	72.26	261
36	33.583		52.59		45.871		42.81		31.943		22.36		19.882		74.87	
Mittl. Ort	25.634		65.69		41.409		36.59		28.027		18.49		15.219		67.13	
sec δ, tg δ	1.614		+1.266		1.096		−0.448		1.470		−1.078		1.038		−0.279	
a, a′	+4.5		−10.3		+2.6		−10.4		+1.9		−10.6		+2.8		−10.8	
b, b′	−0.04		− 0.86		+0.02		− 0.86		+0.04		− 0.85		+0.01		− 0.84	

Tag	310) Br 1147 AR.	Diff.	310) Br 1147 Dekl.	Diff.	312) β Cancri AR.	Diff.	312) β Cancri Dekl.	Diff.
1933	8h 11m		+75° 57′		8h 12m		+9° 23′	
Jan. 1	17.68	56	48.95	242	54.723	191	38.46	121
11	18.24	38	51.37	266	54.914	142	37.25	103
21	18.62	19	54.03	280	55.056	91	36.22	84
30	18.81	0	56.83	281	55.147	39	35.38	64
Feb. 9	18.81	18	59.64	271	55.186	10	34.74	45
19	18.63	35	62.35	250	55.176	54	34.29	27
März 1	18.28	50	64.85	218	55.122	92	34.02	12
11	17.78	62	67.03	179	55.030	120	33.90	0
21	17.16	70	68.82	132	54.910	140	33.90	11
31	16.46	76	70.14	80	54.770	149	34.01	19
Apr. 10	15.70	77	70.94	27	54.621	150	34.20	26
20	14.93	75	71.21	28	54.471	141	34.46	31
30	14.18	70	70.93	80	54.330	125	34.77	36
Mai 10	13.48	63	70.13	129	54.205	103	35.13	39
20	12.85	53	68.84	174	54.102	76	35.52	42
30	12.32	41	67.10	214	54.026	47	35.94	44
Juni 9	11.91	28	64.96	246	53.979	16	36.38	46
19	11.63	15	62.50	272	53.963	16	36.84	46
29	11.48	0	59.78	290	53.979	48	37.30	44
Juli 9	11.48	14	56.88	303	54.027	80	37.74	41
19	11.62	28	53.85	309	54.107	110	38.15	35
29	11.90	41	50.76	307	54.217	139	38.50	26
Aug. 8	12.31	54	47.69	300	54.356	167	38.76	16
18	12.85	66	44.69	286	54.523	193	38.92	1
28	13.51	77	41.83	267	54.716	218	38.93	16
Sept. 7	14.28	87	39.16	243	54.934	242	38.77	35
17	15.15	95	36.73	214	55.176	264	38.42	56
27	16.10	102	34.59	179	55.440	283	37.86	78
Okt. 7	17.12	108	32.80	141	55.723	300	37.08	98
17	18.20	111	31.39	99	56.023	315	36.10	118
27	19.31	112	30.40	53	56.338	323	34.92	135
Nov. 6	20.43	112	29.87	4	56.661	325	33.57	147
16	21.55	108	29.83	45	56.986	320	32.10	155
26	22.63	102	30.28	94	57.306	307	30.55	158
Dez. 6	23.65	92	31.22	141	57.613	286	28.97	154
16	24.57	80	32.63	185	57.899	255	27.43	145
26	25.37	65	34.48	221	58.154	216	25.98	133
36	26.02		36.69		58.370		24.65	
Mittl. Ort	10.46		51.65		53.024		35.76	
sec δ, tg δ	4.123		+4.000		1.014		+0.165	
a, *a′*	+7.6		−10.9		+3.3		−11.0	
b, *b′*	−0.14		−0.84		−0.01		−0.84	

Tag	314) 31 Lyncis AR.	Diff.	314) 31 Lyncis Dekl.	Diff.	315) ε Argus AR.	Diff.	315) ε Argus Dekl.	Diff.
1933	8h 18m		+43° 24′		8h 21m		−59° 17′	
Jan. 1	17.865	255	14.48	80	10.513	183	23.77	383
11	18.120	193	15.28	105	10.696	97	27.60	386
21	18.313	125	16.33	124	10.793	10	31.46	380
30	18.438	56	17.57	138	10.803	74	35.26	363
Feb. 9	18.494	11	18.95	143	10.729	153	38.89	337
19	18.483	72	20.38	142	10.576	224	42.26	306
März 1	18.411	125	21.80	134	10.352	284	45.32	266
11	18.286	165	23.14	118	10.068	332	47.98	223
21	18.121	195	24.32	98	9.736	366	50.21	175
31	17.926	211	25.30	73	9.370	388	51.96	124
Apr. 10	17.715	214	26.03	45	8.982	397	53.20	73
20	17.501	205	26.48	17	8.585	392	53.93	21
30	17.296	186	26.65	12	8.193	378	54.14	31
Mai 10	17.110	158	26.53	41	7.815	352	53.83	83
20	16.952	123	26.12	67	7.463	318	53.00	130
30	16.829	83	25.45	91	7.145	275	51.70	176
Juni 9	16.746	40	24.54	111	6.870	225	49.94	216
19	16.706	4	23.43	129	6.645	170	47.78	248
29	16.710	49	22.14	144	6.475	110	45.30	276
Juli 9	16.759	93	20.70	155	6.365	47	42.54	295
19	16.852	135	19.15	164	6.318	20	39.59	305
29	16.987	176	17.51	170	6.338	87	36.54	305
Aug. 8	17.163	215	15.81	174	6.425	155	33.49	294
18	17.378	251	14.07	175	6.580	220	30.55	273
28	17.629	285	12.32	175	6.800	284	27.82	243
Sept. 7	17.914	317	10.57	171	7.084	343	25.39	200
17	18.231	347	8.86	164	7.427	395	23.39	151
27	18.578	372	7.22	157	7.822	439	21.88	94
Okt. 7	18.950	394	5.65	144	8.261	472	20.94	32
17	19.344	413	4.21	128	8.733	493	20.62	34
27	19.757	423	2.93	110	9.226	501	20.96	101
Nov. 6	20.180	427	1.83	87	9.727	492	21.97	164
16	20.607	422	0.96	60	10.219	470	23.61	223
26	21.029	405	0.36	32	10.689	430	25.84	277
Dez. 6	21.434	377	0.04	0	11.119	377	28.61	319
16	21.811	338	0.04	30	11.496	311	31.80	354
26	22.149	288	0.34	61	11.807	235	35.34	375
36	22.437		0.95		12.042		39.09	
Mittl. Ort	15.388		16.18		8.493		35.94	
sec δ, tg δ	1.376		+0.946		1.958		−1.684	
a, *a′*	+4.1		−11.4		+1.2		−11.6	
b, *b′*	−0.04		−0.82		+0.06		−0.82	

Scheinbare Sternörter 1933

Tag	316) Br 1197				318) ϑ Chamael.				317) o Ursae maj.				320) Grb 1450			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$8^h 22^m$		$-3° 41'$		$8^h 22^m$		$-77° 15'$		$8^h 24^m$		$+60° 56'$		$8^h 28^m$		$+38° 14'$	
	s		″		s		″		s		″		s		″	
Jan. 1	20.395	188	7.71	198	44.79	25	54.80	378	46.57	35	34.73	168	36.293	252	49.43	44
11	20.583	141	9.69	184	45.04	6	58.58	387	46.92	26	36.41	196	36.545	195	49.87	69
21	26 20.724	90	11.53	165	26 45.10	12	62.45	386	27 47.18	16	38.37	215	28 36.740	131	50.56	92
30	20.814	40	13.18	144	44.98	31	66.31	374	47.34	7	40.52	225	36.871	68	51.48	108
Feb. 9	20.854	8	14.62	120	44.67	48	70.05	353	47.41	3	42.77	225	36.939	5	52.56	118
19	20.846	52	15.82	97	44.19	63	73.58	324	47.38	12	45.02	214	36.944	53	53.74	122
März 1	20.794	89	16.79	73	43.56	76	76.82	289	47.26	21	47.16	196	36.891	103	54.96	118
11	20.705	118	17.52	50	42.80	86	79.71	247	47.05	26	49.12	168	36.788	142	56.14	108
21	20.587	137	18.02	28	41.94	95	82.18	201	46.79	31	50.80	133	36.646	172	57.22	94
31	20.450	149	18.30	8	40.99	100	84.19	153	46.48	34	52.13	94	36.474	188	58.16	75
Apr. 10	20.301	149	18.38	11	39.99	102	85.72	101	46.14	35	53.07	51	36.286	192	58.91	52
20	20.152	144	18.27	29	38.97	103	86.73	48	45.79	34	53.58	6	36.094	186	59.43	28
30	20.008	129	17.98	46	37.94	102	87.21	6	45.45	32	53.64	37	35.908	170	59.71	4
Mai 10	19.879	110	17.52	62	36.92	96	87.15	59	45.13	28	53.27	79	35.738	146	59.75	21
20	19.769	86	16.90	76	35.96	89	86.56	110	44.85	23	52.48	118	35.592	116	59.54	44
30	19.683	59	16.14	88	35.07	81	85.46	157	44.62	18	51.30	153	35.476	80	59.10	65
Juni 9	19.624	29	15.26	98	34.26	70	83.89	201	44.44	11	49.77	184	35.396	42	58.45	85
19	19.595	1	14.28	105	33.56	57	81.88	240	44.33	5	47.93	208	35.354	2	57.60	102
29	19.596	31	13.23	110	32.99	44	79.48	270	44.28	2	45.85	229	35.352	38	56.58	115
Juli 9	19.627	62	12.13	110	32.55	28	76.78	293	44.30	9	43.56	244	35.390	78	55.43	128
19	19.689	92	11.03	107	32.27	12	73.85	308	44.39	15	41.12	254	35.468	116	54.15	138
29	19.781	121	9.96	98	32.15	5	70.77	312	44.54	22	38.58	257	35.584	154	52.77	146
Aug. 8	19.902	148	8.98	86	32.20	22	67.65	305	44.76	28	36.01	257	35.738	189	51.31	153
18	20.050	176	8.12	67	32.42	39	64.60	289	45.04	33	33.44	253	35.927	223	49.78	157
28	20.226	203	7.45	45	32.81	54	61.71	261	45.37	39	30.91	243	36.150	256	48.21	160
Sept. 7	20.429	227	7.00	18	33.35	69	59.10	223	45.76	44	28.48	229	36.406	286	46.61	162
17	20.656	250	6.82	12	34.04	81	56.87	176	46.20	49	26.19	212	36.692	314	44.99	160
27	20.906	273	6.94	44	34.85	91	55.11	121	46.69	52	24.07	189	37.006	340	43.39	157
Okt. 7	21.179	291	7.38	77	35.76	99	53.90	59	47.21	56	22.18	162	37.346	364	41.82	150
17	21.470	305	8.15	110	36.75	103	53.31	7	47.77	58	20.56	131	37.710	382	40.32	140
27	21.775	315	9.25	140	37.78	104	53.38	73	48.35	60	19.25	96	38.092	395	38.92	127
Nov. 6	22.090	319	10.65	166	38.82	100	54.11	138	48.95	60	18.29	57	38.487	400	37.65	109
16	22.409	314	12.31	187	39.82	94	55.49	201	49.55	59	17.72	17	38.887	398	36.56	87
26	22.723	303	14.18	203	40.76	83	57.50	256	50.14	57	17.55	25	39.285	386	35.69	62
Dez. 6	23.026	281	16.21	210	41.59	70	60.06	304	50.71	52	17.80	68	39.671	361	35.07	34
16	23.307	251	18.31	212	42.29	55	63.10	341	51.23	47	18.48	110	40.032	327	34.73	4
26	23.558	214	20.43	206	42.84	37	66.51	368	51.70	40	19.58	146	40.359	282	34.69	25
36	23.772		22.49		43.21		70.19		52.10		21.04		40.641		34.94	
Mittl. Ort	18.833		12.05		40.85		68.49		42.89		38.35		34.035		51.43	
sec δ, tg δ	1.002		−0.065		4.538		−4.427		2.059		+1.800		1.273		+0.788	
a, a'	+3.0		−11.7		−1.7		−11.7		+5.0		−11.8		+3.9		−12.1	
b, b'	0.00		− 0.81		+0.17		− 0.81		−0.07		− 0.81		−0.03		− 0.80	

Tag	321) η Cancri AR.		321) η Cancri Dekl.		326) δ Cancri AR.		326) δ Cancri Dekl.	
1933	8h 28m		+20° 39′		8h 40m		+18° 23′	
Jan. 1	52.098	219	72.31	60	54.606	226	66.07	80
11	52.317	169	71.71	39	54.832	178	65.27	58
21	52.486	115	71.32	17	55.010	127	64.69	35
30*)	[28] 52.601	61	71.15	3	[31] 55.137	72	64.34	14
Feb. 9	52.662	8	71.18	19	55.209	19	64.20	5
19	52.670	40	71.37	33	55.228	29	64.25	20
März 1	52.630	83	71.70	41	55.199	71	64.45	32
11	52.547	115	72.11	46	55.128	105	64.77	39
21	52.432	138	72.57	46	55.023	130	65.16	43
31	52.294	152	73.03	45	54.893	144	65.59	43
Apr. 10	52.142	155	73.48	40	54.749	150	66.02	41
20	51.987	148	73.88	34	54.599	145	66.43	37
30	51.839	135	74.22	26	54.454	134	66.80	32
Mai 10	51.704	114	74.48	18	54.320	115	67.12	26
20	51.590	88	74.66	11	54.205	91	67.38	19
30	51.502	59	74.77	3	54.114	65	67.57	13
Juni 9	51.443	27	74.80	5	54.049	35	67.70	6
19	51.416	6	74.75	12	54.014	5	67.76	2
29	51.422	38	74.63	20	54.009	27	67.74	9
Juli 9	51.460	71	74.43	27	54.036	59	67.65	16
19	51.531	103	74.16	36	54.095	89	67.49	25
29	51.634	133	73.80	45	54.184	119	67.24	36
Aug. 8	51.767	163	73.35	54	54.303	148	66.88	46
18	51.930	190	72.81	65	54.451	176	66.42	58
28	52.120	218	72.16	78	54.627	204	65.84	72
Sept. 7	52.338	244	71.38	90	54.831	230	65.12	86
17	52.582	268	70.48	102	55.061	256	64.26	101
27	52.850	291	69.46	115	55.317	280	63.25	115
Okt. 7	53.141	311	68.31	125	55.597	302	62.10	129
17	53.452	328	67.06	133	55.899	321	60.81	139
27	53.780	340	65.73	137	56.220	334	59.42	146
Nov. 6	54.120	345	64.36	139	56.554	342	57.96	150
16	54.465	344	62.97	135	56.896	342	56.46	148
26	54.809	332	61.62	125	57.238	333	54.98	142
Dez. 6	55.141	313	60.37	113	57.571	316	53.56	130
16	55.454	282	59.24	95	57.887	288	52.26	114
26	55.736	245	58.29	76	58.175	251	51.12	95
36	55.981		57.53		58.426		50.17	
Mittl. Ort	50.273		72.02		52.850		66.10	
sec δ, tg δ	1.069		+0.377		1.054		+0.333	
a, *a′*	+3.5		−12.1		+3.4		−12.9	
b, *b′*	−0.02		− 0.80		−0.01		− 0.76	

Tag	327) α Pyxidis AR.		327) α Pyxidis Dekl.		328) ι Cancri AR.		328) ι Cancri Dekl.	
1933	8h 40m		−32° 56′		8h 42m		+29° 0′	
Jan. 1	55.403	197	29.11	328	40.827	246	20.58	18
11	55.600	144	32.39	326	41.073	194	20.40	8
21	55.744	87	35.65	316	41.267	138	20.48	31
30*)	[31] 55.831	30	38.81	297	[31] 41.405	79	20.79	52
Feb. 9	55.861	24	41.78	272	41.484	23	21.31	68
19	55.837	73	44.50	242	41.507	31	21.99	78
März 1	55.764	116	46.92	208	41.476	76	22.77	83
11	55.648	150	49.00	171	41.400	114	23.60	83
21	55.498	175	50.71	131	41.286	142	24.43	77
31	55.323	190	52.02	91	41.144	158	25.20	68
Apr. 10	55.133	197	52.93	49	40.986	165	25.88	55
20	54.936	194	53.42	9	40.821	161	26.43	41
30	54.742	185	53.51	32	40.660	149	26.84	24
Mai 10	54.557	168	53.19	72	40.511	129	27.08	7
20	54.389	146	52.47	108	40.382	104	27.15	9
30	54.243	120	51.39	142	40.278	75	27.06	24
Juni 9	54.123	91	49.97	172	40.203	43	26.82	39
19	54.032	59	48.25	197	40.160	9	26.43	52
29	53.973	24	46.28	217	40.151	26	25.91	65
Juli 9	53.949	11	44.11	230	40.177	60	25.26	77
19	53.960	47	41.81	235	40.237	93	24.49	87
29	54.007	83	39.46	234	40.330	126	23.62	98
Aug. 8	54.090	121	37.12	222	40.456	158	22.64	107
18	54.211	157	34.90	203	40.614	189	21.57	117
28	54.368	193	32.87	176	40.803	218	20.40	125
Sept. 7	54.561	228	31.11	139	41.021	247	19.15	134
17	54.789	260	29.72	97	41.268	275	17.81	141
27	55.049	290	28.75	48	41.543	301	16.40	146
Okt. 7	55.339	316	28.27	5	41.844	324	14.94	149
17	55.655	335	28.32	59	42.168	343	13.45	149
27	55.990	347	28.91	114	42.511	359	11.96	145
Nov. 6	56.337	352	30.05	167	42.870	367	10.51	137
16	56.689	347	31.72	214	43.237	367	9.14	124
26	57.036	332	33.86	255	43.604	359	7.90	108
Dez. 6	57.368	306	36.41	288	43.963	339	6.82	86
16	57.674	272	39.29	312	44.302	311	5.96	62
26	57.946	227	42.41	325	44.613	272	5.34	36
36	58.173		45.66		44.885		4.98	
Mittl. Ort	53.948		38.24		38.868		22.40	
sec δ, tg δ	1.192		−0.648		1.143		+0.554	
a, *a′*	+2.4		−12.9		+3.6		−13.1	
b, *b′*	+0.03		− 0.76		−0.02		− 0.76	

*) Bei Stern 326), 327) und 328) lies Jan. 31

Tag	330) δ Argus AR.		330) δ Argus Dekl.		334) ζ Hydrae AR.		334) ζ Hydrae Dekl.		336) c Carinae AR.		336) c Carinae Dekl.		335) ι Ursae maj. AR.		335) ι Ursae maj. Dekl.	
1933	8h 42m		−54° 27′		8h 51m		+6° 11′		8h 53m		−60° 23′		8h 54m		+48° 17′	
	s		″		s		″		s		″		s		″	
Jan. 1	52.937	216	32.80	375	52.805	222	67.44	153	33.66	25	3.02	376	40.447	315	76.00	82
11	53.153	142	36.55	382	53.027	177	65.91	134	33.91	17	6.78	388	40.762	250	76.82	114
21	53.295	64	40.37	378	53.204	127	64.57	114	34.08	7	10.66	388	41.012	181	77.96	141
31	53.359	12	44.15	365	53.331	76	63.43	92	34.15	1	14.54	379	41.193	106	79.37	161
Feb. 9	53.347	84	47.80	343	53.407	26	62.51	69	34.14	9	18.33	361	41.299	32	80.98	172
19	53.263	150	51.23	314	53.433	21	61.82	48	34.05	17	21.94	334	41.331	37	82.70	176
März 1	53.113	206	54.37	277	53.412	61	61.34	29	33.88	24	25.28	300	41.294	100	84.46	170
11	52.907	254	57.14	237	53.351	94	61.05	12	33.64	30	28.28	260	41.194	151	86.16	157
21	52.653	288	59.51	192	53.257	118	60.93	2	33.34	34	30.88	217	41.043	191	87.73	137
31	52.365	312	61.43	144	53.139	134	60.95	15	33.00	37	33.05	169	40.852	218	89.10	111
Apr. 10	52.053	324	62.87	94	53.005	139	61.10	24	32.63	38	34.74	119	40.634	230	90.21	80
20	51.729	326	63.81	43	52.866	138	61.34	33	32.25	39	35.93	67	40.404	231	91.01	46
30	51.403	316	64.24	7	52.728	128	61.67	40	31.86	39	36.60	15	40.173	220	91.47	13
Mai 10	51.087	299	64.17	58	52.600	113	62.07	45	31.47	37	36.75	38	39.953	199	91.60	22
20	50.788	272	63.59	106	52.487	92	62.52	49	31.10	35	36.37	88	39.754	169	91.38	56
30	50.516	239	62.53	151	52.395	69	63.01	53	30.75	31	35.49	136	39.585	133	90.82	87
Juni 9	50.277	200	61.02	192	52.326	42	63.54	55	30.44	27	34.13	180	39.452	93	89.95	115
19	50.077	155	59.10	227	52.284	15	64.09	55	30.17	22	32.33	219	39.359	49	88.80	141
29	49.922	107	56.83	256	52.269	13	64.64	54	29.95	16	30.14	251	39.310	5	87.39	163
Juli 9	49.815	54	54.27	277	52.282	43	65.18	50	29.79	11	27.63	277	39.305	42	85.76	181
19	49.761	1	51.50	290	52.325	71	65.68	44	29.68	4	24.86	294	39.347	87	83.95	197
29	49.762	59	48.60	294	52.396	99	66.12	35	29.64	3	21.92	300	39.434	131	81.98	207
Aug. 8	49.821	117	45.66	287	52.495	127	66.47	23	29.67	10	18.92	298	39.565	175	79.91	216
18	49.938	175	42.79	270	52.622	155	66.70	7	29.77	17	15.94	285	39.740	217	77.75	221
28	50.113	232	40.09	243	52.777	183	66.77	11	29.94	24	13.09	260	39.957	257	75.54	221
Sept. 7	50.345	286	37.66	205	52.960	209	66.66	32	30.18	31	10.49	225	40.214	296	73.33	220
17	50.631	335	35.61	159	53.169	235	66.34	55	30.49	37	8.24	181	40.510	334	71.13	214
27	50.966	380	34.02	106	53.404	261	65.79	80	30.86	42	6.43	129	40.844	368	68.99	204
Okt. 7	51.346	415	32.96	45	53.665	283	64.99	104	31.28	46	5.14	69	41.212	400	66.95	191
17	51.761	441	32.51	18	53.948	302	63.95	126	31.74	50	4.45	6	41.612	426	65.04	172
27	52.202	455	32.69	83	54.250	318	62.69	148	32.24	52	4.39	61	42.038	446	63.32	149
Nov. 6	52.657	457	33.52	146	54.568	327	61.21	164	32.76	52	5.00	126	42.484	458	61.83	122
16	53.114	444	34.98	206	54.895	328	59.57	176	33.28	51	6.26	189	42.942	461	60.61	90
26	53.558	417	37.04	260	55.223	321	57.81	182	33.79	48	8.15	245	43.403	451	59.71	56
Dez. 6	53.975	377	39.64	305	55.544	306	55.99	181	34.27	44	10.60	295	43.854	429	59.15	18
16	54.352	324	42.69	341	55.850	279	54.18	176	34.71	37	13.55	335	44.283	394	58.97	21
26	54.676	260	46.10	366	56.129	246	52.42	164	35.08	30	16.90	364	44.677	347	59.18	58
36	54.936		49.76		56.375		50.78		35.38		20.54		45.024		59.76	
Mittl. Ort	51.231		45.18		51.244		65.80		31.87		16.47		37.840		81.33	
sec δ, tg δ	1.721		−1.400		1.006		+0.109		2.024		−1.760		1.503		+1.123	
a, a′	+1.7		−13.1		+3.2		−13.7		+1.4		−13.8		+4.2		−13.8	
b, b′	+0.06		− 0.76		0.00		− 0.73		+0.08		− 0.73		−0.05		− 0.72	

Tag	337) α Cancri AR.	Diff.	Dekl.	Diff.	339) 10 Ursae maj. AR.	Diff.	Dekl.	Diff.
1933	$8^h 54^m$		+12° 6′		$8^h 56^m$		+42° 2′	
Jan. 1	51.155	231	65.75	121	20.275	292	52.36	47
11	51.386	185	64.54	101	20.567	234	52.83	78
21	51.571	135	63.53	78	20.801	170	53.61	105
31	51.706	82	62.75	55	20.971	103	54.66	126
Feb. 9	51.788	32	62.20	34	21.074	36	55.92	140
19	51.820	16	61.86	15	21.110	26	57.32	147
März 1	51.804	58	61.71	1	21.084	83	58.79	146
11	51.746	92	61.72	15	21.001	129	60.25	137
21	51.654	118	61.87	24	20.872	165	61.62	122
31	51.536	133	62.11	32	20.707	188	62.84	101
Apr. 10	51.403	140	62.43	35	20.519	200	63.85	77
20	51.263	139	62.78	38	20.319	200	64.62	50
30	51.124	130	63.16	39	20.119	189	65.12	20
Mai 10	50.994	114	63.55	39	19.930	170	65.32	9
20	50.880	94	63.94	37	19.760	144	65.23	37
30	50.786	70	64.31	35	19.616	112	64.86	64
Juni 9	50.716	43	64.66	32	19.504	76	64.22	89
19	50.673	15	64.98	29	19.428	37	63.33	112
29	50.658	13	65.27	23	19.391	2	62.21	131
Juli 9	50.671	43	65.50	17	19.393	42	60.90	149
19	50.714	72	65.67	10	19.435	82	59.41	163
29	50.786	101	65.77	1	19.517	122	57.78	175
Aug. 8	50.887	128	65.76	13	19.639	160	56.03	185
18	51.015	157	65.63	27	19.799	197	54.18	192
28	51.172	185	65.36	43	19.996	233	52.26	195
Sept. 7	51.357	212	64.93	62	20.229	269	50.31	198
17	51.569	238	64.31	81	20.498	302	48.33	196
27	51.807	264	63.50	101	20.800	333	46.37	192
Okt. 7	52.071	287	62.49	120	21.133	363	44.45	184
17	52.358	307	61.29	138	21.496	387	42.61	171
27	52.665	323	59.91	151	21.883	406	40.90	154
Nov. 6	52.988	333	58.40	162	22.289	419	39.36	134
16	53.321	335	56.78	168	22.708	421	38.02	107
26	53.656	329	55.10	167	23.129	414	36.95	77
Dez. 6	53.985	313	53.43	161	23.543	394	36.18	45
16	54.298	289	51.82	151	23.937	364	35.73	11
26	54.587	254	50.31	134	24.301	321	35.62	25
36	54.841		48.97		24.622		35.87	
Mittl. Ort	49.533		65.38		17.958		57.06	
sec δ, tg δ	1.023		+0.215		1.347		+0.902	
a, a′	+3.3		−13.9		+3.9		−13.9	
b, b′	−0.01		−0.72		−0.04		−0.72	

Tag	341) κ Ursae maj. AR.	Diff.	Dekl.	Diff.	343) α Volantis AR.	Diff.	Dekl.	Diff.
1933	$8^h 59^m$		+47° 24′		$9^h 1^m$		−66° 7′	
Jan. 1	6.221	317	76.30	74	25.58	29	28.16	375
11	6.538	254	77.04	107	25.87	19	31.91	391
21	6.792	186	78.11	135	26.06	9	35.82	394
31	6.978	112	79.46	155	26.15	2	39.76	389
Feb. 9	7.090	40	81.01	169	26.13	11	43.65	373
19	7.130	29	82.70	174	26.02	21	47.38	350
März 1	7.101	91	84.44	169	25.81	29	50.88	318
11	7.010	142	86.13	158	25.52	36	54.06	280
21	6.868	182	87.71	138	25.16	42	56.86	238
31	6.686	209	89.09	114	24.74	46	59.24	191
Apr. 10	6.477	223	90.23	84	24.28	48	61.15	141
20	6.254	225	91.07	52	23.80	49	62.56	88
30	6.029	214	91.59	17	23.31	49	63.44	35
Mai 10	5.815	195	91.76	16	22.82	48	63.79	18
20	5.620	166	91.60	49	22.34	45	63.61	71
30	5.454	132	91.11	80	21.89	42	62.90	120
Juni 9	5.322	93	90.31	109	21.47	36	61.70	167
19	5.229	51	89.22	134	21.11	31	60.03	209
29	5.178	8	87.88	157	20.80	24	57.94	245
Juli 9	5.170	37	86.31	176	20.56	17	55.49	273
19	5.207	81	84.55	191	20.39	9	52.76	293
29	5.288	125	82.64	204	20.30	1	49.83	304
Aug. 8	5.413	167	80.60	212	20.29	8	46.79	303
18	5.580	209	78.48	218	20.37	17	43.76	294
28	5.789	249	76.30	221	20.54	26	40.82	273
Sept. 7	6.038	287	74.09	220	20.80	34	38.09	240
17	6.325	325	71.89	215	21.14	42	35.69	198
27	6.650	359	69.74	206	21.56	49	33.71	147
Okt. 7	7.009	392	67.68	194	22.05	55	32.24	89
17	7.401	418	65.74	176	22.60	59	31.35	25
27	7.819	439	63.98	155	23.19	61	31.10	41
Nov. 6	8.258	452	62.43	128	23.80	62	31.51	108
16	8.710	456	61.15	97	24.42	60	32.59	172
26	9.166	448	60.18	63	25.02	57	34.31	232
Dez. 6	9.614	427	59.55	26	25.59	51	36.63	284
16	10.041	394	59.29	13	26.10	44	39.47	327
26	10.435	348	59.42	50	26.54	36	42.74	361
36	10.783		59.92		26.90		46.35	
Mittl. Ort	3.675		81.91		23.61		42.53	
sec δ, tg δ	1.478		+1.088		2.471		−2.259	
a, a′	+4.1		−14.1		+1.0		−14.3	
b, b′	−0.05		−0.71		+0.11		−0.70	

Tag	344) σ² Ursae maj. AR.	Diff.	344) Dekl.	Diff.	345) λ Argus AR.	Diff.	345) Dekl.	Diff.	347) ϑ Hydrae AR.	Diff.	347) Dekl.	Diff.	348) β Argus AR.	Diff.	348) Dekl.	Diff.
1933	9ʰ 4ᵐ		+67° 24′		9ʰ 5ᵐ		−43° 9′		9ʰ 10ᵐ		+2° 35′		9ʰ 12ᵐ		−69° 26′	
Jan. 1	35.89	50	22.04	165	33.144	234	29.62	352	54.272	236	54.04	179	30.39	35	12.67	369
11	36.39	39	23.69	202	33.378	174	33.14	358	54.508	191	52.25	162	30.74	23	16.36	387
21	36.78	28	25.71	230	33.552	113	36.72	354	54.699	144	50.63	141	30.97	12	20.23	396
31	6 37.06	16	28.01	249	6 33.665	49	40.26	342	8 54.843	93	49.22	119	8 31.09	0	24.19	394
Feb. 9	37.22	4	30.50	256	33.714	12	43.68	323	54.936	43	48.03	96	31.09	12	28.13	381
19	37.26	8	33.06	254	33.702	68	46.91	295	54.979	3	47.07	72	30.97	23	31 94	361
März 1	37.18	20	35.60	238	33.634	118	49.86	262	54.976	45	46.35	51	30.74	32	35.55	331
11	36.98	28	37.98	215	33.516	159	52.48	225	54.931	80	45.84	31	30.42	39	38.86	297
21	36.70	35	40.13	182	33.357	192	54.73	184	54.851	105	45.53	13	30.03	47	41.83	256
31	36.35	41	41.95	141	33.165	213	56.57	141	54.746	124	45.40	3	29.56	52	44.39	211
Apr. 10	35.94	44	43.36	96	32.952	227	57.98	96	54.622	132	45.43	16	29.04	55	46.50	161
20	35.50	45	44.32	49	32.725	230	58.94	50	54.490	133	45.59	28	28.49	57	48.11	110
30	35.05	44	44.81	1	32.495	226	59.44	4	54.357	127	45.87	38	27.92	58	49.21	56
Mai 10	34.61	41	44.80	50	32.269	214	59.48	41	54.230	115	46.25	47	27.34	56	49.77	2
20	34.20	37	44.30	97	32.055	196	59.07	85	54.115	98	46.72	54	26.78	54	49.79	51
30	33.83	31	43.33	140	31.859	172	58.22	126	54.017	77	47.26	59	26.24	51	49.28	102
Juni 9	33.52	25	41.93	179	31.687	144	56.96	164	53.940	54	47.85	64	25.73	45	48.26	151
19	33.27	17	40.14	214	31.543	112	55.32	196	53.886	29	48.49	67	25.28	39	46.75	195
29	33.10	10	38.00	243	31.431	76	53.36	224	53.857	3	49.16	67	24.89	32	44.80	234
Juli 9	33.00	1	35.57	266	31.355	38	51.12	244	53.854	25	49.83	64	24.57	24	42.46	265
19	32.99	7	32.91	284	31.317	3	48.68	258	53.879	52	50.47	59	24.33	15	39.81	288
29	33.06	15	30.07	295	31.320	45	46.10	261	53.931	79	51.06	50	24.18	5	36.93	303
Aug. 8	33.21	23	27.12	301	31.365	89	43.49	257	54.010	107	51.56	39	24.13	5	33.90	306
18	33.44	31	24.11	302	31.454	134	40.92	243	54.117	135	51.95	23	24.18	15	30.84	300
28	33.75	38	21.09	296	31.588	178	38.49	218	54.252	164	52.18	3	24.33	26	27.84	281
Sept. 7	34.13	45	18.13	285	31.766	222	36.31	185	54.416	192	52.21	19	24.59	36	25.03	253
17	34.58	52	15.28	268	31.988	265	34.46	144	54.608	220	52.02	44	24.95	46	22.50	214
27	35.10	58	12.60	246	32.253	302	33.02	95	54.828	247	51.58	71	25.41	53	20.36	164
Okt. 7	35.68	63	10.14	218	32.555	337	32.07	40	55.075	272	50.87	99	25.94	61	18.72	109
17	36.31	68	7.96	185	32.892	364	31.67	19	55.347	295	49.88	125	26.55	65	17.63	45
27	36.99	71	6.11	147	33.256	383	31.86	78	55.642	312	48.63	149	27.20	69	17.18	20
Nov. 6	37.70	73	4.64	104	33.639	392	32.64	138	55.954	325	47.14	170	27.89	70	17.38	88
16	38.43	74	3.60	57	34.031	390	34.02	194	56.279	329	45.44	186	28.59	69	18.26	153
26	39.17	72	3.03	8	34.421	376	35.96	243	56.608	326	43.58	197	29.28	65	19.79	214
Dez. 6	39.89	68	2.95	42	34.797	351	38.39	286	56.934	313	41.61	199	29.93	59	21.93	269
16	40.57	62	3.37	91	35.148	314	41.25	319	57.247	289	39.62	198	30.52	52	24.62	316
26	41.19	55	4.28	138	35.462	267	44 44	343	57.536	258	37.64	188	31.04	42	27.78	352
36	41.74		5.66		35.729		47.87		57.794		35.76		31.46		31.30	
Mittl. Ort	31.48		29.98		31.756		40.83		52.813		52.38		28.36		27.75	
sec δ, tg δ	2.603		+2.403		1.371		−0.938		1.001		+0.045		2.848		−2.666	
a, *a′*	+5.3		−14.5		+2.2		−14.5		+3.1		−14.8		+0.7		−14.9	
b, *b′*	−0.12		−0.69		+0.05		−0.69		0.00		−0.67		+0.13		−0.67	

Tag	350) 83 Cancri AR.		350) 83 Cancri Dekl.		352) 40 Lyncis AR.		352) 40 Lyncis Dekl.	
1933	9h 15m		+17° 59′		9h 16m		+34° 40′	
Jan. 1	16.367	255	23.46	98	60.767	289	31.79	7
11	16.622	211	22.48	73	61.056	239	31.72	25
21	16.833	159	21.75	48	61.295	183	31.97	54
31	16.992	107	21.27	24	61.478	122	32.51	80
Feb. 9*)	9 17.099	54	21.03	1	9 61.600	61	33.31	99
19	17.153	4	21.02	18	61.661	3	34.30	113
März 1	17.157	41	21.20	33	61.664	49	35.43	120
11	17.116	78	21.53	44	61.615	94	36.63	119
21	17.038	107	21.97	51	61.521	129	37.82	113
31	16.931	128	22.48	53	61.392	153	38.95	101
Apr. 10	16.803	137	23.01	52	61.239	166	39.96	85
20	16.666	140	23.53	49	61.073	171	40.81	65
30	16.526	134	24.02	44	60.902	164	41.46	42
Mai 10	16.392	121	24.46	37	60.738	151	41.88	19
20	16.271	104	24.83	29	60.587	131	42.07	4
30	16.167	82	25.12	20	60.456	105	42.03	27
Juni 9	16.085	57	25.32	12	60.351	77	41.76	49
19	16.028	31	25.44	3	60.274	45	41.27	71
29	15.997	3	25.47	7	60.229	12	40.56	89
Juli 9	15.994	26	25.40	17	60.217	21	39.67	106
19	16.020	55	25.23	28	60.238	56	38.61	123
29	16.075	83	24.95	40	60.294	90	37.38	138
Aug. 8	16.158	112	24.55	54	60.384	124	36.00	150
18	16.270	141	24.01	67	60.508	157	34.50	161
28	16.411	170	23.34	82	60.665	191	32.89	171
Sept. 7	16.581	199	22.52	98	60.856	224	31.18	179
17	16.780	228	21.54	115	61.080	258	29.39	185
27	17.008	257	20.39	130	61.338	288	27.54	188
Okt. 7	17.265	283	19.09	145	61.626	319	25.66	188
17	17.548	306	17.64	157	61.945	344	23.78	184
27	17.854	327	16.07	166	62.289	367	21.94	175
Nov. 6	18.181	339	14.41	170	62.656	383	20.19	162
16	18.520	347	12.71	169	63.039	389	18.57	143
26	18.867	343	11.02	163	63.428	388	17.14	120
Dez. 6	19.210	332	9.39	151	63.816	374	15.94	93
16	19.542	309	7.88	135	64.190	350	15.01	61
26	19.851	278	6.53	113	64.540	314	14.40	29
36	20.129		5.40		64.854		14.11	
Mittl. Ort	14.728		25.31		58.773		36.95	
sec δ, tg δ	1.051		+0.325		1.216		+0.692	
a, *a'*	+3.4		−15.1		+3.7		−15.2	
b, *b'*	−0.02		−0.66		−0.03		−0.65	

Tag	353) ϰ Argus AR.		353) ϰ Argus Dekl.		354) α Hydrae AR.		354) α Hydrae Dekl.	
1933	9h 20m		−54° 43′		9h 24m		−8° 21′	
Jan. 1	3.658	279	12.93	363	19.059	241	58.55	233
11	3.937	208	16.56	378	19.300	197	60.88	222
21	4.145	133	20.34	382	19.497	149	63.10	207
31	4.278	57	24.16	377	19.646	100	65.17	186
Feb. 9*)	10 4.335	18	27.93	361	11 19.746	50	67.03	163
19	4.317	86	31.54	339	19.796	3	68.66	137
März 1	4.231	148	34.93	308	19.799	38	70.03	112
11	4.083	201	38.01	273	19.761	74	71.15	86
21	3.882	243	40.74	232	19.687	101	72.01	61
31	3.639	275	43.06	187	19.586	120	72.62	37
Apr. 10	3.364	296	44.93	140	19.466	130	72.99	14
20	3.068	306	46.33	90	19.336	134	73.13	8
30	2.762	307	47.23	40	19.202	131	73.05	28
Mai 10	2.455	299	47.63	10	19.071	121	72.77	47
20	2.156	283	47.53	59	18.950	107	72.30	64
30	1.873	259	46.94	108	18.843	88	71.66	80
Juni 9	1.614	228	45.86	151	18.755	68	70.86	93
19	1.386	192	44.35	191	18.687	45	69.93	103
29	1.194	150	42.44	226	18.642	20	68.90	111
Juli 9	1.044	102	40.18	254	18.622	6	67.79	115
19	0.942	52	37.64	273	18.628	32	66.64	114
29	0.890	2	34.91	284	18.660	60	65.50	109
Aug. 8	0.892	60	32.07	285	18.720	89	64.41	99
18	0.952	120	29.22	277	18.809	117	63.42	83
28	1.072	179	26.45	256	18.926	147	62.59	63
Sept. 7	1.251	239	23.89	228	19.073	177	61.96	37
17	1.490	295	21.61	187	19.250	208	61.59	7
27	1.785	348	19.74	139	19.458	237	61.52	26
Okt. 7	2.133	393	18.35	83	19.695	264	61.78	62
17	2.526	430	17.52	23	19.959	289	62.40	97
27	2.956	455	17.29	41	20.248	309	63.37	133
Nov. 6	3.411	469	17.70	105	20.557	323	64.70	165
16	3.880	468	18.75	167	20.880	329	66.35	192
26	4.348	452	20.42	225	21.209	327	68.27	214
Dez. 6	4.800	421	22.67	275	21.536	315	70.41	230
16	5.221	376	25.42	317	21.851	293	72.71	237
26	5.597	320	28.59	349	22.144	263	75.08	237
36	5.917		32.08		22.407		77.45	
Mittl. Ort	2.231		26.32		17.740		62.32	
sec δ, tg δ	1.732		−1.414		1.011		−0.147	
a, *a'*	+1.9		−15.4		+2.9		−15.6	
b, *b'*	+0.07		−0.64		+0.01		−0.63	

*) Bei Stern 353) und 354) lies Feb. 10

Scheinbare Sternörter 1933

Tag	355) *h* Ursae maj. AR.	Δ	355) Dekl.	Δ	359) ψ Argus AR.	Δ	359) Dekl.	Δ
1933	9h 26m		+63° 20′		9h 28m		−40° 10′	
Jan. 1	19.81	47	72.49	127	4.774	257	10.52	338
11	20.28	39	73.76	168	5.031	203	13.90	348
21	20.67	30	75.44	202	5.234	144	17.38	346
31	20.97	19	77.46	228	5.378	85	20.84	337
Feb. 10	21.16	8	79.74	242	5.463	25	24.21	320
19	21.24	1	82.16	245	5.488	31	27.41	295
März 1	21.23	11	84.61	239	5.457	80	30.36	265
11	21.12	20	87.00	222	5.377	122	33.01	231
21	20.92	27	89.22	195	5.255	156	35.32	193
31	20.65	32	91.17	161	5.099	182	37.25	152
Apr. 10	20.33	35	92.78	121	4.917	196	38.77	110
20	19.98	37	93.99	77	4.721	205	39.87	67
30	19.61	36	94.76	31	4.516	204	40.54	22
Mai 10	19.25	35	95.07	17	4.312	197	40.76	21
20	18.90	32	94.90	63	4.115	184	40.55	63
30	18.58	28	94.27	107	3.931	165	39.92	104
Juni 9	18.30	23	93.20	147	3.766	142	38.88	140
19	18.07	17	91.73	184	3.624	115	37.48	174
29	17.90	11	89.89	215	3.509	85	35.74	202
Juli 9	17.79	4	87.74	243	3.424	51	33.72	223
19	17.75	2	85.31	265	3.373	15	31.49	239
29	17.77	9	82.66	281	3.358	23	29.10	245
Aug. 8	17.86	16	79.85	292	3.381	64	26.65	244
18	18.02	22	76.93	298	3.445	106	24.21	233
28	18.24	29	73.95	298	3.551	149	21.88	213
Sept. 7	18.53	35	70.97	292	3.700	192	19.75	183
17	18.88	41	68.05	282	3.892	234	17.92	146
27	19.29	47	65.23	265	4.126	275	16.46	101
Okt. 7	19.76	52	62.58	243	4.401	312	15.45	48
17	20.28	57	60.15	214	4.713	342	14.97	6
27	20.85	60	58.01	181	5.055	367	15.03	65
Nov. 6	21.45	63	56.20	141	5.422	380	15.68	122
16	22.08	64	54.79	98	5.802	385	16.90	177
26	22.72	64	53.81	50	6.187	378	18.67	227
Dez. 6	23.36	61	53.31	1	6.565	359	20.94	269
16	23.97	57	53.30	50	6.924	328	23.63	304
26	24.54	52	53.80	98	7.252	287	26.67	328
36	25.06		54.78		7.539		29.95	
Mittl. Ort	16.15		82.22		3.537		21.43	
sec δ, tg δ	2.230		+1.993		1.309		−0.844	
a, *a′*	+4.7		−15.7		+2.4		−15.8	
b, *b′*	−0.10		−0.62		+0.04		−0.62	

Tag	358) ϑ Ursae maj. AR.	Δ	358) Dekl.	Δ	357) *d* Ursae maj. AR.	Δ	357) Dekl.	Δ
1933	9h 28m		+51° 58′		9h 28m		+70° 7′	
Jan. 1	25.963	371	52.80	71	40.34	60	24.37	153
11	26.334	308	53.51	111	40.94	49	25.90	195
21	26.642	237	54.62	145	41.43	37	27.85	229
31	26.879	158	56.07	171	41.80	23	30.14	253
Feb. 10	27.037	80	57.78	190	42.03	9	32.67	267
19	27.117	3	59.68	199	42.12	4	35.34	269
März 1	27.120	67	61.67	198	42.08	16	38.03	259
11	27.053	129	63.65	189	41.92	27	40.62	238
21	26.924	179	65.54	170	41.65	37	43.00	207
31	26.745	215	67.24	146	41.28	44	45.07	170
Apr. 10	26.530	240	68.70	115	40.84	48	46.77	125
20	26.290	249	69.85	79	40.36	51	48.02	76
30	26.041	247	70.64	41	39.85	52	48.78	26
Mai 10	25.794	235	71.05	3	39.33	49	49.04	26
20	25.559	211	71.08	35	38.84	45	48.78	76
30	25.348	181	70.73	73	38.39	41	48.02	123
Juni 9	25.167	144	70.00	108	37.98	34	46.79	167
19	25.023	104	68.92	140	37.64	26	45.12	207
29	24.919	60	67.52	168	37.38	18	43.05	240
Juli 9	24.859	15	65.84	193	37.20	10	40.65	268
19	24.844	32	63.91	215	37.10	1	37.97	291
29	24.876	79	61.76	232	37.09	9	35.06	307
Aug. 8	24.955	126	59.44	244	37.18	18	31.99	317
18	25.081	173	57.00	253	37.36	26	28.82	322
28	25.254	219	54.47	259	37.62	35	25.60	319
Sept. 7	25.473	264	51.88	259	37.97	44	22.41	311
17	25.737	309	49.29	255	38.41	52	19.30	297
27	26.046	351	46.74	247	38.93	59	16.33	277
Okt. 7	26.397	392	44.27	233	39.52	66	13.56	249
17	26.789	426	41.94	214	40.18	72	11.07	218
27	27.215	456	39.80	190	40.90	77	8.89	178
Nov. 6	27.671	478	37.90	160	41.67	79	7.11	135
16	28.149	488	36.30	125	42.46	81	5.76	87
26	28.637	488	35.05	86	43.27	81	4.89	35
Dez. 6	29.125	472	34.19	44	44.08	78	4.54	19
16	29.597	444	33.75	1	44.86	72	4.73	72
26	30.041	401	33.76	43	45.58	65	5.45	123
36	30.442		34.19		46.23		6.68	
Mittl. Ort	23.300		61.50		35.59		34.80	
sec δ, tg δ	1.624		+1.279		2.942		+2.766	
a, *a′*	+4.1		−15.8		+5.3		−15.8	
b, *b′*	−0.07		−0.61		−0.15		−0.61	

Tag	360) 10 Leonis min.				366) ϑ Antliae				367) ε Leonis				369) υ Argus			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	9h 30m		+36° 41′		9h 41m		−27° 27′		9h 42m		+24° 4′		9h 45m		−64° 45′	
Jan. 1	9.564	307	39.36	6	13.982	258	35.04	303	4.795	286	56.24	80	27.09	38	23.53	352
11	9.871	258	39.30	29	14.240	212	38.07	306	5.081	243	55.44	50	27.47	30	27.05	378
21	10.129	201	39.59	60	14.452	162	41.13	301	5.324	193	54.94	20	27.77	20	30.83	390
31	10.330	140	40.19	88	14.614	108	44.14	288	5.517	140	54.74	8	27.97	10	34.73	395
Feb. 10	10.470	77	41.07	110	14.722	56	47.02	269	5.657	84	54.82	33	28.07	1	38.68	388
19	10.547	18	42.17	125	14.778	5	49.71	244	5.741	32	55.15	54	28.08	9	42.56	372
März 1	10.565	37	43.42	133	14.783	40	52.15	216	5.773	16	55.69	69	27.99	17	46.28	349
11	10.528	83	44.75	133	14.743	79	54.31	185	5.757	59	56.38	79	27.82	24	49.77	318
21	10.445	122	46.08	127	14.664	110	56.16	151	5.698	92	57.17	83	27.58	31	52.95	281
31	10.323	149	47.35	114	14.554	133	57.67	117	5.606	117	58.00	83	27.27	35	55.76	241
Apr. 10	10.174	166	48.49	97	14.421	148	58.84	81	5.489	133	58.83	77	26.92	39	58.17	194
20	10.008	172	49.46	76	14.273	155	59.65	46	5.356	140	59.60	69	26.53	42	60.11	144
30	9.836	170	50.22	51	14.118	157	60.11	10	5.216	139	60.29	57	26.11	43	61.55	93
Mai 10	9.666	158	50.73	26	13.961	150	60.21	25	5.077	131	60.86	44	25.68	43	62.48	41
20	9.508	141	50.99	0	13.811	140	59.96	58	4.946	117	61.30	29	25.25	43	62.89	12
30	9.367	117	50.99	25	13.671	124	59.38	90	4.829	98	61.59	14	24.82	40	62.77	65
Juni 9	9.250	89	50.74	50	13.547	106	58.48	118	4.731	77	61.73	2	24.42	37	62.12	115
19	9.161	59	50.24	74	13.441	84	57.30	144	4.654	53	61.71	18	24.05	33	60.97	161
29	9.102	27	49.50	96	13.357	59	55.86	165	4.601	26	61.53	33	23.72	29	59.36	203
Juli 9	9.075	6	48.54	115	13.298	32	54.21	181	4.575	1	61.20	48	23.43	22	57.33	238
19	9.081	41	47.39	134	13.266	4	52.40	191	4.576	29	60.72	64	23.21	16	54.95	266
29	9.122	75	46.05	150	13.262	28	50.49	195	4.605	58	60.08	80	23.05	9	52.29	286
Aug. 8	9.197	109	44.55	165	13.290	60	48.54	191	4.663	87	59.28	94	22.96	0	49.43	296
18	9.306	145	42.90	177	13.350	94	46.63	179	4.750	117	58.34	109	22.96	7	46.47	296
28	9.451	179	41.13	187	13.444	130	44.84	160	4.867	149	57.25	125	23.03	16	43.51	284
Sept. 7	9.630	214	39.26	196	13.574	167	43.24	133	5.016	180	56.00	139	23.19	25	40.67	262
17	9.844	249	37.30	201	13.741	203	41.91	99	5.196	212	54.61	154	23.44	33	38.05	229
27	10.093	283	35.29	204	13.944	239	40.92	58	5.408	244	53.07	166	23.77	41	35.76	185
Okt. 7	10.376	316	33.25	204	14.183	273	40.34	13	5.652	274	51.41	177	24.18	48	33.91	134
17	10.692	344	31.21	198	14.456	302	40.21	35	5.926	303	49.64	183	24.66	53	32.57	74
27	11.036	369	29.23	188	14.758	326	40.56	85	6.229	328	47.81	187	25.19	58	31.83	11
Nov. 6	11.405	388	27.35	173	15.084	344	41.41	134	6.557	346	45.94	186	25.77	60	31.72	55
16	11.793	397	25.62	153	15.428	352	42.75	180	6.903	358	44.08	179	26.37	61	32.27	121
26	12.190	399	24.09	127	15.780	350	44.55	220	7.261	361	42.29	166	26.98	59	33.48	183
Dez. 6	12.589	387	22.82	98	16.130	338	46.75	255	7.622	354	40.63	148	27.57	55	35.31	242
16	12.976	365	21.84	64	16.468	316	49.30	280	7.976	335	39.15	126	28.12	51	37.73	291
26	13.341	332	21.20	29	16.784	282	52.10	298	8.311	307	37.89	98	28.63	43	40.64	332
36	13.673		20.91		17.066		55.08		8.618		36.91		29.06		43.96	
Mittl. Ort	7.565		45.84		12.824		43.16		3.153		60.95		25.68		38.90	
sec δ, tg δ	1.247		+0.745		1.127		−0.520		1.095		+0.447		2.345		−2.122	
a, *a*′	+3.7		−15.9		+2.7		−16.5		+3.4		−16.5		+1.5		−16.7	
b, *b*′	−0.04		−0.61		+0.03		−0.57		−0.02		−0.57		+0.12		−0.55	

Tag	368) υ Ursae maj.				370) 6 Sextantis				372) Grb 1586				378) π Leonis			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$9^h 46^m$		$+59° 20'$		$9^h 47^m$		$-3° 55'$		$9^h 52^m$		$+73° 11'$		$9^h 56^m$		$+8° 21'$	
Jan. 1	$17^s.680$	453	$66''.77$	90	$52^s.757$	261	$41''.00$	217	$31^s.46$	73	$44''.66$	138	$41^s.833$	275	$57''.53$	165
11	18.133	382	67.67	134	53.018	221	43.17	204	32.19	62	46.04	186	42.108	236	55.88	143
21	18.515	301	69.01	171	53.239	175	45.21	187	32.81	48	47.90	225	42.344	191	54.45	118
31	18.816	211	70.72	202	53.414	126	47.08	165	33.29	33	50.15	255	42.535	142	53.27	93
Feb. 10	$_{17}$19.027	118	72.74	223	$_{17}$53.540	76	48.73	142	$_{18}$33.62	18	52.70	273	$_{19}$42.677	92	52.34	68
19	19.145	27	74.97	234	53.616	30	50.15	116	33.80	2	55.43	281	42.769	43	51.66	43
März 1	19.172	61	77.31	233	53.646	13	51.31	92	33.82	14	58.24	276	42.812	1	51.23	21
11	19.111	137	79.64	222	53.633	50	52.23	68	33.68	27	61.00	258	42.811	40	51.02	2
21	18.974	202	81.86	203	53.583	80	52.91	45	33.41	39	63.58	232	42.771	72	51.00	15
31	18.772	253	83.89	175	53.503	102	53.36	25	33.02	48	65.90	195	42.699	95	51.15	27
Apr. 10	18.519	287	85.64	139	53.401	116	53.61	5	32.54	55	67.85	152	42.604	111	51.42	36
20	18.232	307	87.03	100	53.285	123	53.66	13	31.99	59	69.37	104	42.493	120	51.78	42
30	17.925	313	88.03	57	53.162	123	53.53	29	31.40	62	70.41	52	42.373	120	52.20	47
Mai 10	17.612	303	88.60	12	53.039	117	53.24	43	30.78	61	70.93	2	42.253	116	52.67	50
20	17.309	283	88.72	32	52.922	106	52.81	55	30.17	58	70.91	55	42.137	105	53.17	49
30	17.026	252	88.40	76	52.816	92	52.26	66	29.59	53	70.36	105	42.032	92	53.66	48
Juni 9	16.774	213	87.64	117	52.724	74	51.60	76	29.06	47	69.31	154	41.940	74	54.14	46
19	16.561	169	86.47	155	52.650	54	50.84	82	28.59	39	67.77	196	41.866	55	54.60	42
29	16.392	118	84.92	189	52.596	33	50.02	87	28.20	30	65.81	235	41.811	34	55.02	37
Juli 9	16.274	65	83.03	218	52.563	9	49.15	88	27.90	21	63.46	269	41.777	11	55.39	30
19	16.209	10	80.85	244	52.554	15	48.27	86	27.69	10	60.77	295	41.766	14	55.69	21
29	16.199	46	78.41	264	52.569	41	47.41	79	27.59	0	57.82	316	41.780	39	55.90	10
Aug. 8	16.245	104	75.77	280	52.610	68	46.62	69	27.59	10	54.66	331	41.819	65	56.00	3
18	16.349	162	72.97	289	52.678	97	45.93	55	27.69	21	51.35	339	41.884	93	55.97	19
28	16.511	219	70.08	295	52.775	126	45.38	35	27.90	32	47.96	340	41.977	122	55.78	38
Sept. 7	16.730	276	67.13	296	52.901	157	45.03	12	28.22	42	44.56	336	42.099	153	55.40	58
17	17.006	331	64.17	289	53.058	188	44.91	15	28.64	52	41.20	323	42.252	184	54.82	80
27	17.337	386	61.28	279	53.246	219	45.06	45	29.16	62	37.97	306	42.436	216	54.02	103
Okt. 7	17.723	437	58.49	261	53.465	250	45.51	77	29.78	70	34.91	280	42.652	246	52.99	126
17	18.160	481	55.88	239	53.715	277	46.28	108	30.48	78	32.11	248	42.898	276	51.73	148
27	18.641	521	53.49	209	53.992	301	47.36	139	31.26	85	29.63	210	43.174	301	50.25	168
Nov. 6	19.162	550	51.40	174	54.293	320	48.75	168	32.11	89	27.53	165	43.475	321	48.57	183
16	19.712	568	49.66	134	54.613	330	50.43	192	33.00	92	25.88	116	43.796	334	46.74	193
26	20.280	572	48.32	89	54.943	333	52.35	209	33.92	93	24.72	62	44.130	339	44.81	199
Dez. 6	20.852	560	47.43	40	55.276	325	54.44	220	34.85	91	24.10	6	44.469	334	42.82	197
16	21.412	531	47.03	10	55.601	307	56.64	225	35.76	86	24.04	50	44.803	319	40.85	189
26	21.943	485	47.13	59	55.908	281	58.89	223	36.62	79	24.54	106	45.122	293	38.96	176
36	22.428		47.72		56.189		61.12		37.41		25.60		45.415		37.20	
Mittl. Ort	14.586		77.92		51.505		42.99		26.18		57.50		40.496		59.13	
sec δ, tg δ	1.962		+1.688		1.002		−0.069		3.459		+3.312		1.011		+0.147	
a, *a'*	+4.3		−16.7		+3.0		−16.8		+5.4		−17.0		+3.2		−17.2	
b, *b'*	−0.09		− 0.55		0.00		− 0.55		−0.19		− 0.53		−0.01		− 0.51	

Tag	379) η Leonis AR.	Δ	379) η Leonis Dekl.	Δ	380) α Leonis AR.	Δ	380) α Leonis Dekl.	Δ	381) λ Hydrae AR.	Δ	381) λ Hydrae Dekl.	Δ	382) q Velorum AR.	Δ	382) q Velorum Dekl.	Δ
1933	$10^h\ 3^m$		$+17°\ 4'$		$10^h\ 4^m$		$+12°\ 17'$		$10^h\ 7^m$		$-12°\ 1'$		$10^h\ 11^m$		$-41°\ 47'$	
Jan. 1	42.394	290	80.05	127	49.732	284	40.08	149	20.412	274	16.31	250	56.091	310	10.44	323
11	42.684	251	78.78	99	50.016	246	38.59	125	20.686	234	18.81	244	56.401	260	13.67	339
21	42.935	206	77.79	70	50.262	201	37.34	99	20.920	190	21.25	231	56.661	205	17.06	347
31	43.141	155	77.09	41	50.463	152	36.35	71	21.110	143	23.56	214	56.866	146	20.53	344
Feb. 10	43.296	103	76.68	14	50.615	102	35.64	44	21.253	93	25.70	193	57.012	87	23.97	334
20	21 43.399	53	76.54	10	21 50.717	53	35.20	20	22 21.346	45	27.63	168	23 57.099	29	27.31	316
März 1	43.452	7	76.64	30	50.770	6	35.00	2	21.391	2	29.31	142	57.128	23	30.47	292
11	43.459	35	76.94	47	50.776	33	35.02	20	21.393	36	30.73	116	57.105	71	33.39	263
21	43.424	69	77.41	57	50.743	66	35.22	35	21.357	68	31.89	89	57.034	110	36.02	229
31	43.355	95	77.98	64	50.677	92	35.57	44	21.289	93	32.78	64	56.924	142	38.31	193
Apr. 10	43.260	113	78.62	66	50.585	109	36.01	51	21.196	109	33.42	38	56.782	165	40.24	153
20	43.147	122	79.28	65	50.476	118	36.52	54	21.087	119	33.80	14	56.617	182	41.77	111
30	43.025	125	79.93	60	50.358	121	37.06	54	20.968	122	33.94	8	56.435	190	42.88	69
Mai 10	42.900	121	80.53	54	50.237	117	37.60	52	20.846	120	33.86	30	56.245	192	43.57	25
20	42.779	112	81.07	45	50.120	108	38.12	49	20.726	114	33.56	49	56.053	187	43.82	17
30	42.667	97	81.52	36	50.012	96	38.61	44	20.612	102	33.07	68	55.866	179	43.65	59
Juni 9	42.570	81	81.88	25	49.916	79	39.05	37	20.510	87	32.39	84	55.687	164	43.06	99
19	42.489	61	82.13	13	49.837	60	39.42	29	20.423	71	31.55	97	55.523	145	42.07	136
29	42.428	40	82.26	1	49.777	39	39.71	21	20.352	52	30.58	108	55.378	122	40.71	169
Juli 9	42.388	16	82.27	12	49.738	17	39.92	11	20.300	31	29.50	115	55.256	94	39.02	195
19	42.372	9	82.15	26	49.721	6	40.03	0	20.269	7	28.35	118	55.162	63	37.07	218
29	42.381	35	81.89	40	49.727	32	40.03	13	20.262	18	27.17	117	55.099	28	34.89	232
Aug. 8	42.416	61	81.49	56	49.759	59	39.90	28	20.280	45	26.00	109	55.071	11	32.57	237
18	42.477	90	80.93	72	49.818	86	39.62	44	20.325	74	24.91	97	55.082	53	30.20	235
28	42.567	120	80.21	90	49.904	116	39.18	62	20.399	105	23.94	79	55.135	98	27.85	223
Sept. 7	42.687	151	79.31	109	50.020	146	38.56	82	20.504	137	23.15	56	55.233	144	25.62	201
17	42.838	184	78.22	127	50.166	178	37.74	102	20.641	171	22.59	28	55.377	192	23.61	171
27	43.022	216	76.95	145	50.344	211	36.72	123	20.812	206	22.31	6	55.569	240	21.90	132
Okt. 7	43.238	248	75.50	162	50.555	243	35.49	144	21.018	239	22.37	41	55.809	284	20.58	88
17	43.486	279	73.88	176	50.798	273	34.05	162	21.257	269	22.78	78	56.093	324	19.70	31
27	43.765	306	72.12	188	51.071	300	32.43	178	21.526	297	23.56	116	56.417	359	19.39	23
Nov. 6	44.071	328	70.24	194	51.371	322	30.65	190	21.823	318	24.72	152	56.776	383	19.62	79
16	44.399	343	68.30	195	51.693	336	28.75	196	22.141	333	26.24	183	57.159	398	20.41	136
26	44.742	350	66.35	191	52.029	343	26.79	197	22.474	337	28.07	211	57.557	402	21.77	188
Dez. 6	45.092	346	64.44	181	52.372	340	24.82	191	22.811	333	30.18	231	57.959	391	23.65	236
16	45.438	333	62.63	163	52.712	326	22.91	180	23.144	318	32.49	245	58.350	370	26.01	277
26	45.771	308	61.00	143	53.038	302	21.11	163	23.462	292	34.94	250	58.720	336	28.78	308
36	46.079		59.57		53.340		19.48		23.754		37.44		59.056		31.86	
Mittl. Ort	40.970		84.28		48.382		43.10		19.312		19.97		55.133		21.84	
sec δ, tg δ	1.046		+0.307		1.023		+0.218		1.022		−0.213		1.341		−0.894	
a, a'	+3.3		−17.5		+3.2		−17.6		+2.9		−17.7		+2.5		−17.9	
b, b'	−0.02		− 0.49		−0.01		− 0.48		+0.01		− 0.47		+0.05		− 0.45	

Tag	384) ζ Leonis AR.		384) ζ Leonis Dekl.		383) λ Ursae maj. AR.		383) λ Ursae maj. Dekl.		386) μ Ursae maj. AR.		386) μ Ursae maj. Dekl.		387) 30 H. Ursae maj. AR.		387) 30 H. Ursae maj. Dekl.	
1933	10h 12m		+23° 44′		10h 13m		+43° 14′		10h 18m		+41° 49′		10h 19m		+65° 53′	
Jan. 1	59.577	307	60.48	100	5.875	366	47.72	10	22.663	364	62.53	21	22.91	58	67.35	80
11	59.884	269	59.48	68	6.241	320	47.62	34	23.027	319	62.32	23	23.49	51	68.15	132
21	60.153	222	58.80	35	6.561	264	47.96	74	23.346	266	62.55	63	24.00	42	69.47	177
31	60.375	171	58.45	4	6.825	201	48.70	110	23.612	205	63.18	100	24.42	32	71.24	215
Feb. 10	60.546	117	58.41	26	7.026	136	49.80	138	23.817	140	64.18	130	24.74	20	73.39	241
20	60.663	65	58.67	49	7.162	70	51.18	161	23.957	76	65.48	152	24.94	9	75.80	259
März 1	60.728	15	59.16	70	7.232	7	52.79	172	24.033	16	67.00	167	25.03	2	78.39	264
11	60.743	28	59.86	83	7.239	48	54.51	177	24.049	40	68.67	173	25.01	11	81.03	257
21	60.715	66	60.69	91	7.191	96	56.28	173	24.009	87	70.40	170	24.90	21	83.60	240
31	60.649	95	61.60	94	7.095	135	58.01	160	23.922	125	72.10	159	24.69	28	86.00	214
Apr. 10	60.554	114	62.54	90	6.960	162	59.61	141	23.797	153	73.69	142	24.41	34	88.14	178
20	60.440	127	63.44	83	6.798	180	61.02	117	23.644	171	75.11	120	24.07	38	89.92	137
30	60.313	131	64.27	73	6.618	187	62.19	88	23.473	179	76.31	92	23.69	40	91.29	91
Mai 10	60.182	129	65.00	59	6.431	184	63.07	56	23.294	178	77.23	62	23.29	40	92.20	43
20	60.053	120	65.59	44	6.247	176	63.63	23	23.116	170	77.85	30	22.89	39	92.63	7
30	59.933	108	66.03	28	6.071	159	63.86	11	22.946	155	78.15	3	22.50	37	92.56	56
Juni 9	59.825	91	66.31	10	5.912	138	63.75	44	22.791	135	78.12	36	22.13	33	92.00	103
19	59.734	72	66.41	7	5.774	112	63.31	76	22.656	112	77.76	67	21.80	29	90.97	149
29	59.662	49	66.34	25	5.662	83	62.55	106	22.544	84	77.09	98	21.51	24	89.48	189
Juli 9	59.613	26	66.09	43	5.579	51	61.49	135	22.460	54	76.11	125	21.27	17	87.59	226
19	59.587	1	65.66	60	5.528	18	60.14	160	22.406	21	74.86	152	21.10	11	85.33	257
29	59.586	25	65.06	78	5.510	17	58.54	183	22.385	12	73.34	176	20.99	5	82.76	284
Aug. 8	59.611	53	64.28	95	5.527	54	56.71	204	22.397	47	71.58	195	20.94	3	79.92	305
18	59.664	83	63.33	113	5.581	92	54.67	221	22.444	84	69.63	215	20.97	10	76.87	320
28	59.747	114	62.20	131	5.673	132	52.46	235	22.528	122	67.48	229	21.07	17	73.67	330
Sept. 7	59.861	147	60.89	148	5.805	172	50.11	247	22.650	163	65.19	242	21.24	25	70.37	332
17	60.008	181	59.41	164	5.977	214	47.64	253	22.813	203	62.77	249	21.49	32	67.05	329
27	60.189	215	57.77	178	6.191	255	45.11	255	23.016	244	60.28	254	21.81	39	63.76	320
Okt. 7	60.404	249	55.99	191	6.446	296	42.56	254	23.260	285	57.74	254	22.20	46	60.56	302
17	60.653	282	54.08	200	6.742	335	40.02	246	23.545	324	55.20	248	22.66	53	57.54	279
27	60.935	311	52.08	205	7.077	369	37.56	234	23.869	360	52.72	236	23.19	59	54.75	249
Nov. 6	61.246	335	50.03	205	7.446	399	35.22	214	24.229	388	50.36	219	23.78	63	52.26	211
16	61.581	353	47.98	200	7.845	419	33.08	188	24.617	410	48.17	195	24.41	66	50.15	167
26	61.934	362	45.98	188	8.264	429	31.20	157	25.027	421	46.22	165	25.07	68	48.48	119
Dez. 6	62.296	360	44.10	170	8.693	428	29.63	121	25.448	422	44.57	129	25.75	69	47.29	65
16	62.656	348	42.40	147	9.121	414	28.42	80	25.870	409	43.28	91	26.44	66	46.64	9
26	63.004	325	40.93	119	9.535	386	27.62	37	26.279	383	42.37	47	27.10	61	46.55	46
36	63.329		39.74		9.921		27.25		26.662		41.90		27.71		47.01	
Mittl. Ort	58.086		66.94		3.882		58.56		20.752		73.47		19.40		82.00	
sec δ, tg δ	1.093		+0.440		1.373		+0.941		1.342		+0.895		2.449		+2.236	
a, *a′*	+3.3		−17.9		+3.6		−17.9		+3.6		−18.1		+4.3		−18.1	
b, *b′*	−0.03		−0.45		−0.06		−0.45		−0.05		−0.43		−0.13		−0.43	

Tag	389) μ Hydrae AR.	Δ	389) μ Hydrae Dekl.	Δ	391) J Carinae AR.	Δ	391) J Carinae Dekl.	Δ	390) 31 Leonis min. AR.	Δ	390) 31 Leonis min. Dekl.	Δ	392) Lac. α Antliae AR.	Δ	392) Lac. α Antliae Dekl.	Δ
1933	$10^h 22^m$		$-16° 29'$		$10^h 22^m$		$-73° 41'$		$10^h 24^m$		$+37° 2'$		$10^h 24^m$		$-30° 43'$	
Jan. 1	$51^s.964$	286	$32''.86$	263	$65^s.24$	63	$7''.53$	317	$2^s.699$	349	$53''.95$	47	$5^s.919$	300	$25''.49$	298
11	52.250	248	35.49	261	65.87	52	10.70	353	3.048	308	53.48	6	6.219	259	28.47	308
21	52.498	205	38.10	253	66.39	38	14.23	378	3.356	257	53.42	34	6.478	210	31.55	310
31	52.703	158	40.63	239	66.77	25	18.01	394	3.613	201	53.76	70	6.688	159	34.65	304
Feb. 10	52.861	108	43.02	219	67.02	11	21.95	399	3.814	142	54.46	101	6.847	107	37.69	290
20	$_{26}$52.969	60	45.21	196	$_{26}$67.13	2	25.94	395	$_{26}$3.956	81	55.47	126	$_{26}$6.954	55	40.59	270
März 1	53.029	16	47.17	171	67.11	15	29.89	382	4.037	25	56.73	143	7.009	7	43.29	246
11	53.045	23	48.88	143	66.96	27	33.71	361	4.062	28	58.16	152	7.016	36	45.75	218
21	53.022	57	50.31	116	66.69	37	37.32	333	4.034	72	59.68	153	6.980	71	47.93	187
31	52.965	83	51.47	89	66.32	46	40.65	297	3.962	107	61.21	147	6.909	101	49.80	154
Apr. 10	52.882	102	52.36	61	65.86	54	43.62	257	3.855	135	62.68	134	6.808	122	51.34	120
20	52.780	115	52.97	34	65.32	59	46.19	211	3.720	150	64.02	116	6.686	137	52.54	84
30	52.665	120	53.31	8	64.73	64	48.30	163	3.570	160	65.18	93	6.549	145	53.38	48
Mai 10	52.545	121	53.39	17	64.09	67	49.93	110	3.410	160	66.11	67	6.404	148	53.86	13
20	52.424	117	53.22	40	63.42	68	51.03	57	3.250	153	66.78	40	6.256	144	53.99	23
30	52.307	109	52.82	62	62.74	67	51.60	2	3.097	140	67.18	11	6.112	137	53.76	57
Juni 9	52.198	97	52.20	82	62.07	65	51.62	52	2.957	123	67.29	19	5.975	126	53.19	88
19	52.101	83	51.38	100	61.42	61	51.10	104	2.834	102	67.10	48	5.849	111	52.31	118
29	52.018	65	50.38	114	60.81	55	50.06	154	2.732	77	66.62	75	5.738	93	51.13	144
Juli 9	51.953	45	49.24	125	60.26	48	48.52	197	2.655	51	65.87	102	5.645	70	49.69	164
19	51.908	24	47.99	131	59.78	39	46.55	236	2.604	22	64.85	127	5.575	46	48.05	181
29	51.884	0	46.68	132	59.39	28	44.19	266	2.582	8	63.58	150	5.529	18	46.24	191
Aug. 8	51.884	28	45.36	129	59.11	18	41.53	287	2.590	41	62.08	171	5.511	13	44.33	193
18	51.912	57	44.07	119	58.93	4	38.66	299	2.631	74	60.37	189	5.524	47	42.40	188
28	51.969	88	42.88	103	58.89	9	35.67	301	2.705	110	58.48	207	5.571	85	40.52	175
Sept. 7	52.057	123	41.85	80	58.98	22	32.66	289	2.815	148	56.41	221	5.656	125	38.77	154
17	52.180	158	41.05	53	59.20	36	29.77	267	2.963	186	54.20	231	5.781	165	37.23	126
27	52.338	195	40.52	19	59.56	49	27.10	234	3.149	225	51.89	240	5.946	207	35.97	89
Okt. 7	52.533	231	40.33	17	60.05	61	24.76	190	3.374	265	49.49	243	6.153	247	35.08	48
17	52.764	264	40.50	57	60.66	71	22.86	138	3.639	302	47.06	242	6.400	285	34.60	1
27	53.028	294	41.07	97	61.37	80	21.48	79	3.941	336	44.64	236	6.685	317	34.59	49
Nov. 6	53.322	319	42.04	137	62.17	85	20.69	14	4.277	366	42.28	223	7.002	344	35.08	99
16	53.641	335	43.41	173	63.02	88	20.55	53	4.643	387	40.05	204	7.346	360	36.07	147
26	53.976	343	45.14	205	63.90	87	21.08	119	5.030	399	38.01	178	7.706	368	37.54	192
Dez. 6	54.319	341	47.19	231	64.77	84	22.27	181	5.429	401	36.23	148	8.074	363	39.46	232
16	54.660	327	49.50	250	65.61	79	24.08	239	5.830	390	34.75	112	8.437	348	41.78	264
26	54.987	305	52.00	260	66.40	70	26.47	290	6.220	367	33.63	73	8.785	321	44.42	288
36	55.292		54.60		67.10		29.37		6.587		32.90		9.106		47.30	
Mittl. Ort	50.972		37.43		64.09		24.57		0.969		64.27		5.010		34.04	
sec δ, tg δ	1.043		−0.296		3.561		−3.418		1.253		+0.755		1.163		−0.594	
a, a'	+2.9		−18.3		+1.2		−18.3		+3.5		−18.3		+2.8		−18.3	
b, b'	+0.02		−0.41		+0.21		−0.41		−0.05		−0.41		+0.04		−0.41	

Tag	393) *s* Carinae AR.	Δ	Dekl.	Δ	394) 36 Ursae maj. AR.	Δ	Dekl.	Δ	395) 9 H. Draconis AR.	Δ	Dekl.	Δ	404) 33 Sextantis AR.	Δ	Dekl.	Δ
1933	10h 25m		−58° 23′		10h 26m		+56° 18′		10h 29m		+76° 2′		10h 37m		−1° 23′	
Jan. 1	25.754	401	34.18	325	23.719	462	75.33	34	32.78	93	76.25	104	60.748	295	20.48	214
11	26.155	338	37.43	355	24.181	408	75.67	85	33.71	82	77.29	158	61.043	262	22.62	201
21	26.493	264	40.98	373	24.589	340	76.52	130	34.53	67	78.87	206	61.305	221	24.63	181
31	26.757	187	44.71	382	24.929	263	77.82	169	35.20	51	80.93	244	61.526	176	26.44	159
Feb. 10	26.944	108	48.53	381	25.192	181	79.51	200	35.71	33	83.37	272	61.702	128	28.03	135
20	(26) 27.052	32	52.34	371	(27) 25.373	96	81.51	221	(28) 36.04	15	86.09	287	61.830	82	29.38	109
März 1*)	27.084	40	56.05	354	25.469	15	83.72	232	36.19	3	88.96	292	61.912	38	30.47	83
11	27.044	105	59.59	329	25.484	61	86.04	231	36.16	21	91.88	282	(2) 61.950	2	31.30	60
21	26.939	162	62.88	297	25.423	127	88.35	222	35.95	36	94.70	262	61.948	36	31.90	37
31	26.777	210	65.85	261	25.296	181	90.57	203	35.59	50	97.32	232	61.912	63	32.27	17
Apr. 10	26.567	249	68.46	220	25.115	223	92.60	175	35.09	60	99.64	192	61.849	84	32.44	1
20	26.318	277	70.66	175	24.892	252	94.35	141	34.49	68	101.56	147	61.765	97	32.43	16
30	26.041	297	72.41	127	24.640	268	95.76	103	33.81	73	103.03	95	61.668	105	32.27	29
Mai 10	25.744	308	73.68	78	24.372	271	96.79	61	33.08	75	103.98	41	61.563	107	31.98	39
20	25.436	310	74.46	28	24.101	265	97.40	17	32.33	75	104.39	14	61.456	104	31.59	49
30	25.126	304	74.74	23	23.836	247	97.57	26	31.58	71	104.25	67	61.352	98	31.10	57
Juni 9	24.822	291	74.51	72	23.589	224	97.31	70	30.87	66	103.58	120	61.254	88	30.53	63
19	24.531	269	73.79	119	23.365	192	96.61	110	30.21	59	102.38	168	61.166	75	29.90	66
29	24.262	240	72.60	163	23.173	155	95.51	149	29.62	50	100.70	214	61.091	60	29.24	67
Juli 9	24.022	203	70.97	200	23.018	115	94.02	184	29.12	40	98.56	252	61.031	43	28.57	66
19	23.819	160	68.97	233	22.903	71	92.18	216	28.72	30	96.04	287	60.988	23	27.91	63
29	23.659	108	66.64	257	22.832	24	90.02	242	28.42	18	93.17	315	60.965	2	27.28	57
Aug. 8	23.551	50	64.07	272	22.808	26	87.60	266	28.24	5	90.02	336	60.963	22	26.71	46
18	23.501	12	61.35	280	22.834	77	84.94	283	28.19	8	86.66	352	60.985	48	26.25	32
28	23.513	80	58.55	275	22.911	129	82.11	297	28.27	20	83.14	359	61.033	78	25.93	15
Sept. 7	23.593	150	55.80	260	23.040	183	79.14	304	28.47	33	79.55	360	61.111	109	25.78	7
17	23.743	221	53.20	234	23.223	239	76.10	307	28.80	45	75.95	355	61.220	143	25.85	31
27	23.964	292	50.86	198	23.462	293	73.03	305	29.25	58	72.40	341	61.363	177	26.16	59
Okt. 7	24.256	357	48.88	153	23.755	347	69.98	294	29.83	70	68.99	320	61.540	213	26.75	87
17	24.613	415	47.35	101	24.102	398	67.04	279	30.53	81	65.79	292	61.753	247	27.62	116
27	25.028	465	46.34	41	24.500	444	64.25	256	31.34	90	62.87	256	62.000	279	28.78	145
Nov. 6	25.493	500	45.93	22	24.944	482	61.69	226	32.24	98	60.31	213	62.279	304	30.23	171
16	25.993	521	46.15	86	25.426	512	59.43	190	33.22	104	58.18	165	62.583	324	31.94	192
26	26.514	525	47.01	147	25.938	528	57.53	147	34.26	107	56.53	110	62.907	336	33.86	209
Dez. 6	27.039	513	48.48	206	26.466	529	56.06	101	35.33	107	55.43	52	63.243	338	35.95	220
16	27.552	483	50.54	258	26.995	517	55.05	50	36.40	105	54.91	8	63.581	329	38.15	223
26	28.035	438	53.12	302	27.512	486	54.55	2	37.45	98	54.99	69	63.910	311	40.38	219
36	28.473		56.14		27.998		54.57		38.43		55.68		64.221		42.57	
Mittl. Ort	24.875		49.04		21.179		89.38		27.15		92.48		59.713		20.05	
sec δ, tg δ	1.908		−1.625		1.803		+1.501		4.150		+4.028		1.000		−0.024	
a, *a′*	+2.2		−18.4		+3.9		−18.4		+5.1		−18.5		+3.1		−18.8	
b, *b′*	+0.10		− 0.40		−0.09		− 0.40		−0.25		− 0.38		0.00		− 0.35	

*) Bei Stern 404) lies März 2

Tag	406) ϑ Argus AR.		Dekl.	
1933	10ʰ 40ᵐ		−64° 2′	
Jan. 1	34.48	48	19.10	310
11	34.96	41	22.20	345
21	35.37	33	25.65	369
31	35.70	24	29.34	385
Feb. 10	35.94	15	33.19	389
20	36.09	6	37.08	385
März 2	36.15	3	40.93	372
11	[2] 36.12	10	44.65	351
21	36.02	17	48.16	323
31	35.85	24	51.39	290
Apr. 10	35.61	28	54.29	250
20	35.33	32	56.79	207
30	35.01	36	58.86	160
Mai 10	34.65	37	60.46	110
20	34.28	38	61.56	59
30	33.90	39	62.15	6
Juni 9	33.51	37	62.21	46
19	33.14	35	61.75	95
29	32.79	33	60.80	143
Juli 9	32.46	29	59.37	185
19	32.17	23	57.52	222
29	31.94	17	55.30	252
Aug. 8	31.77	11	52.78	273
18	31.66	3	50.05	285
28	31.63	5	47.20	287
Sept. 7	31.68	13	44.33	277
17	31.81	22	41.56	255
27	32.03	31	39.01	225
Okt. 7	32.34	39	36.76	182
17	32.73	46	34.94	132
27	33.19	53	33.62	74
Nov. 6	33.72	58	32.88	12
16	34.30	60	32.76	53
26	34.90	61	33.29	117
Dez. 6	35.51	60	34.46	178
16	36.11	57	36.24	234
26	36.68	52	38.58	284
36	37.20		41.42	
Mittl. Ort	33.74		34.96	
sec δ, tg δ	2.285		−2.054	
a, a′	+2.1		−18.9	
b, b′	+0.13		−0.34	

Tag	407) 42 Leonis min. AR.		Dekl.	
1933	10ʰ 42ᵐ		+31° 1′	
Jan. 1	10.175	341	58.63	87
11	10.516	305	57.76	49
21	10.821	261	57.27	9
31	11.082	210	57.18	28
Feb. 10	11.292	155	57.46	61
20	11.447	100	58.07	89
März 2	11.547	46	58.96	112
11	[3] 11.593	3	60.08	126
21	11.590	45	61.34	133
31	11.545	80	62.67	134
Apr. 10	11.465	107	64.01	127
20	11.358	125	65.28	116
30	11.233	135	66.44	100
Mai 10	11.098	139	67.44	79
20	10.959	136	68.23	57
30	10.823	127	68.80	33
Juni 9	10.696	115	69.13	8
19	10.581	99	69.21	18
29	10.482	79	69.03	43
Juli 9	10.403	58	68.60	68
19	10.345	34	67.92	91
29	10.311	8	67.01	115
Aug. 8	10.303	20	65.86	137
18	10.323	51	64.49	157
28	10.374	84	62.92	177
Sept. 7	10.458	118	61.15	194
17	10.576	156	59.21	210
27	10.732	194	57.11	222
Okt. 7	10.926	233	54.89	232
17	11.159	271	52.57	237
27	11.430	307	50.20	237
Nov. 6	11.737	337	47.83	232
16	12.074	361	45.51	220
26	12.435	376	43.31	201
Dez. 6	12.811	381	41.30	176
16	13.192	374	39.54	146
26	13.566	357	38.08	111
36	13.923		36.97	
Mittl. Ort	8.699		68.65	
sec δ, tg δ	1.167		+0.602	
a, a′	+3.3		−18.9	
b, b′	−0.04		−0.33	

Tag	408) μ Argus AR.		Dekl.	
1933	10ʰ 43ᵐ		−49° 3′	
Jan. 1	53.591	371	44.28	310
11	53.962	320	47.38	335
21	54.282	264	50.73	352
31	54.546	202	54.25	360
Feb. 10	54.748	138	57.85	357
20	54.886	75	61.42	347
März 2	54.961	16	64.89	330
11	[3] 54.977	39	68.19	306
21	54.938	87	71.25	276
31	54.851	127	74.01	242
Apr. 10	54.724	159	76.43	205
20	54.565	185	78.48	163
30	54.380	203	80.11	120
Mai 10	54.177	214	81.31	75
20	53.963	218	82.06	30
30	53.745	215	82.36	17
Juni 9	53.530	209	82.19	61
19	53.321	195	81.58	104
29	53.126	176	80.54	143
Juli 9	52.950	151	79.11	178
19	52.799	121	77.33	208
29	52.678	84	75.25	231
Aug. 8	52.594	43	72.94	244
18	52.551	4	70.50	252
28	52.555	56	67.98	247
Sept. 7	52.611	110	65.51	233
17	52.721	168	63.18	210
27	52.889	225	61.08	177
Okt. 7	53.114	281	59.31	135
17	53.395	333	57.96	85
27	53.728	377	57.11	30
Nov. 6	54.105	413	56.81	28
16	54.518	437	57.09	87
26	54.955	448	57.96	145
Dez. 6	55.403	445	59.41	200
16	55.848	428	61.41	248
26	56.276	396	63.89	288
36	56.672		66.77	
Mittl. Ort	52.881		57.26	
sec δ, tg δ	1.526		−1.153	
a, a′	+2.6		−18.9	
b, b′	+0.07		−0.33	

Tag	409) l Leonis AR.		Dekl.	
1933	10ʰ 45ᵐ		+10° 53′	
Jan. 1	45.378	307	55.97	171
11	45.685	276	54.26	146
21	45.961	235	52.80	119
31	46.196	190	51.61	91
Feb. 10	46.386	143	50.70	61
20	46.529	94	50.09	34
März 2	46.623	48	49.75	8
11	[4] 46.671	6	49.67	14
21	46.677	29	49.81	31
31	46.648	58	50.12	45
Apr. 10	46.590	81	50.57	54
20	46.509	96	51.11	59
30	46.413	105	51.70	62
Mai 10	46.308	107	52.32	61
20	46.201	106	52.93	57
30	46.095	100	53.50	53
Juni 9	45.995	90	54.03	47
19	45.905	78	54.50	38
29	45.827	63	54.88	29
Juli 9	45.764	46	55.17	18
19	45.718	27	55.35	6
29	45.691	5	55.41	7
Aug. 8	45.686	19	55.34	23
18	45.705	44	55.11	41
28	45.749	73	54.70	59
Sept. 7	45.822	105	54.11	81
17	45.927	139	53.30	102
27	46.066	173	52.28	124
Okt. 7	46.239	209	51.04	147
17	46.448	244	49.57	167
27	46.692	277	47.90	185
Nov. 6	46.969	305	46.05	200
16	47.274	327	44.05	208
26	47.601	340	41.97	212
Dez. 6	47.941	346	39.85	209
16	48.287	338	37.76	200
26	48.625	322	35.76	183
36	48.947		33.93	
Mittl. Ort	44.249		60.50	
sec δ, tg δ	1.018		+0.193	
a, a′	+3.2		−19.0	
b, b′	−0.01		−0.32	

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Tag	415) ι Velorum AR.	Diff.	415) ι Velorum Dekl.	Diff.	416) β Ursae maj. AR.	Diff.	416) β Ursae maj. Dekl.	Diff.
1933	$10^h\ 57^m$		$-41°\ 51'$		$10^h\ 57^m$		$+56°\ 43'$	
Jan. 1	5.205	354	47.30	296	50.988	491	74.47	2
11	5.559	313	50.26	318	51.479	445	74.49	55
21	5.872	264	53.44	332	51.924	384	75.04	106
31	6.136	210	56.76	336	52.308	311	76.10	151
Feb. 10	6.346	153	60.12	333	52.619	233	77.61	189
20	6.499	97	63.45	321	52.852	151	79.50	217
März 2	6.596	43	66.66	304	53.003	68	81.67	235
11	[7] 6.639	6	69.70	280	[7] 53.071	10	84.02	243
21	6.633	50	72.50	253	53.061	81	86.45	238
31	6.583	86	75.03	220	52.980	142	88.83	226
Apr. 10	6.497	117	77.23	185	52.838	191	91.09	203
20	6.380	140	79.08	148	52.647	229	93.12	173
30	6.240	156	80.56	108	52.418	254	94.85	136
Mai 10	6.084	168	81.64	67	52.164	267	96.21	96
20	5.916	173	82.31	26	51.897	270	97.17	52
30	5.743	173	82.57	15	51.627	262	97.69	7
Juni 9	5.570	168	82.42	55	51.365	248	97.76	38
19	5.402	159	81.87	94	51.117	224	97.38	82
29	5.243	145	80.93	129	50.893	195	96.56	124
Juli 9	5.098	126	79.64	160	50.698	161	95.32	164
19	4.972	102	78.04	186	50.537	122	93.68	199
29	4.870	73	76.18	207	50.415	80	91.69	232
Aug. 8	4.797	39	74.11	219	50.335	33	89.37	261
18	4.758	0	71.92	224	50.302	16	86.76	283
28	4.758	43	69.68	220	50.318	69	83.93	301
Sept. 7	4.801	90	67.48	207	50.387	123	80.92	316
17	4.891	140	65.41	184	50.510	180	77.76	323
27	5.031	192	63.57	154	50.690	239	74.53	323
Okt. 7	5.223	243	62.03	113	50.929	298	71.30	319
17	5.466	290	60.90	68	51.227	354	68.11	307
27	5.756	334	60.22	16	51.581	408	65.04	288
Nov. 6	6.090	369	60.06	39	51.989	455	62.16	261
16	6.459	395	60.45	93	52.444	493	59.55	227
26	6.854	409	61.38	146	52.937	519	57.28	186
Dez. 6	7.263	411	62.84	197	53.456	532	55.42	139
16	7.674	400	64.81	240	53.988	528	54.03	88
26	8.074	375	67.21	277	54.516	508	53.15	33
36	8.449		69.98		55.024		52.82	
Mittl. Ort	4.563		58.43		48.711		90.88	
sec δ, tg δ	1.343		−0.896		1.823		+1.525	
a, a'	+2.7		−19.3		+3.6		−19.3	
b, b'	+0.06		−0.27		−0.10		−0.27	

Tag	417) α Ursae maj. AR.	Diff.	417) α Ursae maj. Dekl.	Diff.	418) χ Leonis AR.	Diff.	418) χ Leonis Dekl.	Diff.
1933	$10^h\ 59^m$		$+62°\ 6'$		$11^h\ 1^m$		$+7°\ 41'$	
Jan. 1	39.22	56	29.68	18	34.749	312	50.80	187
11	39.78	51	29.86	74	35.061	282	48.93	166
21	40.29	43	30.60	127	35.343	245	47.27	141
31	40.72	35	31.87	172	35.588	202	45.86	112
Feb. 10	41.07	27	33.59	211	35.790	155	44.74	83
20	41.34	17	35.70	238	35.945	108	43.91	56
März 2	41.51	7	38.08	254	36.053	63	43.35	29
11	[7] 41.58	2	40.62	260	[8] 36.116	22	43.06	5
21	41.56	11	43.22	254	36.138	14	43.01	14
31	41.45	18	45.76	238	36.124	45	43.15	30
Apr. 10	41.27	23	48.14	212	36.079	68	43.45	43
20	41.04	28	50.26	178	36.011	85	43.88	51
30	40.76	31	52.04	139	35.926	96	44.39	57
Mai 10	40.45	33	53.43	95	35.830	101	44.96	59
20	40.12	34	54.38	47	35.729	103	45.55	58
30	39.78	33	54.85	1	35.626	99	46.13	57
Juni 9	39.45	31	54.84	49	35.527	92	46.70	53
19	39.14	29	54.35	96	35.435	83	47.23	47
29	38.85	25	53.39	141	35.352	70	47.70	40
Juli 9	38.60	20	51.98	182	35.282	56	48.10	31
19	38.40	16	50.16	219	35.226	40	48.41	21
29	38.24	12	47.97	253	35.186	19	48.62	9
Aug. 8	38.12	5	45.44	281	35.167	3	48.71	7
18	38.07	0	42.63	305	35.170	27	48.64	23
28	38.07	6	39.58	321	35.197	56	48.41	41
Sept. 7	38.13	13	36.37	335	35.253	87	48.00	63
17	38.26	20	33.02	339	35.340	121	47.37	85
27	38.46	26	29.63	339	35.461	157	46.52	109
Okt. 7	38.72	33	26.24	331	35.618	193	45.43	133
17	39.05	40	22.93	316	35.811	230	44.10	156
27	39.45	46	19.77	293	36.041	265	42.54	177
Nov. 6	39.91	51	16.84	263	36.306	295	40.77	195
16	40.42	56	14.21	224	36.601	319	38.82	208
26	40.98	59	11.97	180	36.920	336	36.74	215
Dez. 6	41.57	60	10.17	130	37.256	342	34.59	216
16	42.17	60	8.87	74	37.598	339	32.43	211
26	42.77	57	8.13	17	37.937	324	30.32	198
36	43.34		7.96		38.261		28.34	
Mittl. Ort	36.58		46.97		33.743		55.02	
sec δ, tg δ	2.138		+1.890		1.009		+0.135	
a, a'	+3.7		−19.4		+3.1		−19.4	
b, b'	−0.12		−0.26		−0.01		−0.25	

Tag	420) ψ Ursae maj. AR.		420) Dekl.		421) β Crateris AR.		421) Dekl.	
1933	11h 5m		+44° 51′		11h 8m		−22° 27′	
Jan. 1	55.978	407	29.58	52	22.311	321	29.49	265
11	56.385	371	29.06	3	22.632	290	32.14	273
21	56.756	323	29.03	44	22.922	250	34.87	271
31	57.079	267	29.47	89	23.172	205	37.58	265
Feb. 10	57.346	205	30.36	129	23.377	158	40.23	250
20	57.551	141	31.65	160	23.535	110	42.73	232
März 2	[9] 57.692	76	33.25	183	[9] 23.645	65	45.05	210
11	57.768	16	35.08	196	23.710	23	47.15	185
21	57.784	38	37.04	201	23.733	13	49.00	159
31	57.746	86	39.05	196	23.720	45	50.59	131
Apr. 10	57.660	122	41.01	183	23.675	69	51.90	103
20	57.538	152	42.84	162	23.606	89	52.93	75
30	57.386	171	44.46	136	23.517	102	53.68	46
Mai 10	57.215	181	45.82	105	23.415	111	54.14	18
20	57.034	184	46.87	70	23.304	115	54.32	9
30	56.850	181	47.57	34	23.189	114	54.23	35
Juni 9	56.669	170	47.91	3	23.075	111	53.88	60
19	56.499	157	47.88	41	22.964	104	53.28	83
29	56.342	132	47.47	78	22.860	94	52.45	103
Juli 9	56.210	111	46.69	112	22.766	80	51.42	119
19	56.099	85	45.57	145	22.686	64	50.23	133
29	56.014	55	44.12	176	22.622	44	48.90	140
Aug. 8	55.959	21	42.36	204	22.578	19	47.50	143
18	55.938	15	40.32	228	22.559	9	46.07	140
28	55.953	54	38.04	250	22.568	42	44.67	130
Sept. 7	56.007	96	35.54	267	22.610	77	43.37	113
17	56.103	141	32.87	281	22.687	116	42.24	90
27	56.244	187	30.06	289	22.803	157	41.34	60
Okt. 7	56.431	235	27.17	292	22.960	199	40.74	25
17	56.666	283	24.25	290	23.159	239	40.49	14
27	56.949	327	21.35	281	23.398	277	40.63	55
Nov. 6	57.276	367	18.54	264	23.675	310	41.18	98
16	57.643	400	15.90	241	23.985	335	42.16	139
26	58.043	423	13.49	210	24.320	351	43.55	177
Dez. 6	58.466	436	11.39	173	24.671	357	45.32	211
16	58.902	434	9.66	130	25.028	352	47.43	237
26	59.336	420	8.36	82	25.380	336	49.80	257
36	59.756		7.54		25.716		52.37	
Mittl. Ort	54.299		44.31		21.614		34.82	
sec δ, tg δ	1.411		+0.995		1.082		−0.413	
a, *a′*	+3.4		−19.5		+2.9		−19.5	
b, *b′*	−0.06		−0.23		+0.03		−0.22	

Tag	422) δ Leonis AR.		422) Dekl.		423) ϑ Leonis AR.		423) Dekl.	
1933	11h 10m		+20° 52′		11h 10m		+15° 47′	
Jan. 1	34.028	334	79.07	146	44.639	325	38.69	164
11	34.362	304	77.61	113	44.964	296	37.05	134
21	34.666	266	76.48	78	45.260	260	35.71	103
31	34.932	222	75.70	42	45.520	216	34.68	70
Feb. 10	35.154	174	75.28	7	45.736	170	33.98	38
20	35.328	124	75.21	24	45.906	121	33.60	7
März 2	[10] 35.452	76	75.45	51	[10] 46.027	75	33.53	20
11	35.528	31	75.96	73	46.102	31	33.73	43
21	35.559	9	76.69	88	46.133	7	34.16	61
31	35.550	42	77.57	98	46.126	39	34.77	73
Apr. 10	35.508	69	78.55	102	46.087	65	35.50	81
20	35.439	90	79.57	101	46.022	84	36.31	83
30	35.349	103	80.58	95	45.938	97	37.14	82
Mai 10	35.246	110	81.53	85	45.841	105	37.96	77
20	35.136	113	82.38	72	45.736	106	38.73	69
30	35.023	110	83.10	58	45.630	104	39.42	58
Juni 9	34.913	104	83.68	40	45.526	98	40.00	46
19	34.809	94	84.08	21	45.428	90	40.46	33
29	34.715	82	84.29	3	45.338	78	40.79	18
Juli 9	34.633	67	84.32	16	45.260	64	40.97	2
19	34.566	49	84.16	37	45.196	47	40.99	14
29	34.517	29	83.79	58	45.149	27	40.85	32
Aug. 8	34.488	7	83.21	78	45.122	6	40.53	50
18	34.481	20	82.43	99	45.116	20	40.03	70
28	34.501	49	81.44	121	45.136	48	39.33	91
Sept. 7	34.550	81	80.23	142	45.184	79	38.42	112
17	34.631	117	78.81	162	45.263	114	37.30	133
27	34.748	154	77.19	182	45.377	151	35.97	154
Okt. 7	34.902	192	75.37	199	45.528	189	34.43	175
17	35.094	231	73.38	214	45.717	227	32.68	193
27	35.325	269	71.24	225	45.944	263	30.75	207
Nov. 6	35.594	301	68.99	230	46.207	295	28.68	218
16	35.895	328	66.69	230	46.502	322	26.50	223
26	36.223	348	64.39	223	46.824	341	24.27	222
Dez. 6	36.571	357	62.16	210	47.165	350	22.05	214
16	36.928	357	60.06	190	47.515	348	19.91	199
26	37.285	344	58.16	165	47.863	337	17.92	179
36	37.629		56.51		48.200		16.13	
Mittl. Ort	32.903		87.79		43.586		45.87	
sec δ, tg δ	1.070		+0.382		1.039		+0.283	
a, *a′*	+3.2		−19.6		+3.2		−19.6	
b, *b′*	−0.02		−0.21		−0.02		−0.21	

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Tag	425) ν Ursae maj. AR.		425) Dekl.		426) δ Crateris AR.		426) Dekl.	
1933	$11^h 14^m$		$+33° 27'$		$11^h 15^m$		$-14° 24'$	
Jan. 1	53.245	365	23.89	103	60.062	318	54.16	247
11	53.610	333	22.86	61	60.380	289	56.63	247
21	53.943	294	22.25	16	60.669	252	59.10	240
31	54.237	246	22.09	25	60.921	210	61.50	227
Feb. 10	54.483	193	22.34	63	61.131	164	63.77	209
20	54.676	137	22.97	97	61.295	119	65.86	187
März 2	54.813	84	23.94	124	61.414	75	67.73	164
11*)	11 54.897	33	25.18	142	11 61.489	34	69.37	139
21	54.930	13	26.60	154	61.523	2	70.76	114
31	54.917	53	28.14	157	61.521	33	71.90	89
Apr. 10	54.864	84	29.71	153	61.488	57	72.79	64
20	54.780	109	31.24	142	61.431	76	73.43	40
30	54.671	126	32.66	126	61.355	89	73.83	18
Mai 10	54.545	135	33.92	105	61.266	99	74.01	3
20	54.410	139	34.97	80	61.167	102	73.98	24
30	54.271	137	35.77	53	61.065	103	73.74	43
Juni 9	54.134	130	36.30	25	60.962	100	73.31	60
19	54.004	120	36.55	4	60.862	94	72.71	75
29	53.884	105	36.51	33	60.768	86	71.96	88
Juli 9	53.779	88	36.18	63	60.682	74	71.08	98
19	53.691	68	35.55	91	60.608	58	70.10	105
29	53.623	45	34.64	118	60.550	41	69.05	108
Aug. 8	53.578	18	33.46	144	60.509	18	67.97	105
18	53.560	10	32.02	169	60.491	7	66.92	99
28	53.570	43	30.33	191	60.498	36	65.93	87
Sept. 7	53.613	79	28.42	211	60.534	70	65.06	69
17	53.692	118	26.31	230	60.604	107	64.37	45
27	53.810	158	24.01	244	60.711	145	63.92	18
Okt. 7	53.968	201	21.57	255	60.856	185	63.74	15
17	54.169	243	19.02	261	61.041	225	63.89	49
27	54.412	284	16.41	262	61.266	263	64.38	86
Nov. 6	54.696	321	13.79	257	61.529	295	65.24	123
16	55.017	351	11.22	245	61.824	321	66.47	157
26	55.368	374	8.77	225	62.145	339	68.04	187
Dez. 6	55.742	386	6.52	199	62.484	347	69.91	212
16	56.128	386	4.53	166	62.831	344	72.03	232
26	56.514	375	2.87	128	63.175	331	74.35	243
36	56.889		1.59		63.506		76.78	
Mittl. Ort	51.927		36.40		59.345		56.70	
sec δ, tg δ	1.199		+0.661		1.033		−0.257	
a, *a'*	+3.2		−19.7		+3.0		−19.7	
b, *b'*	−0.04		−0.20		+0.02		−0.19	

Tag	427) σ Leonis AR.		427) Dekl.		428) π Centauri AR.		428) Dekl.	
1933	$11^h 17^m$		$+6° 23'$		$11^h 17^m$		$-54° 7'$	
Jan. 1	41.861	319	44.02	195	57.055	437	11.30	279
11	42.180	292	42.07	175	57.492	391	14.09	315
21	42.472	257	40.32	151	57.883	334	17.24	340
31	42.729	215	38.81	123	58.217	272	20.64	355
Feb. 10	42.944	170	37.58	94	58.489	205	24.19	362
20	43.114	125	36.64	65	58.694	139	27.81	361
März 2	43.239	80	35.99	38	58.833	73	31.42	350
11*)	12 43.319	38	35.61	14	12 58.906	11	34.92	333
21	43.357	1	35.47	8	58.917	43	38.25	310
31	43.358	29	35.55	25	58.874	93	41.35	281
Apr. 10	43.329	54	35.80	39	58.781	135	44.16	247
20	43.275	73	36.19	49	58.646	171	46.63	209
30	43.202	86	36.68	55	58.475	198	48.72	168
Mai 10	43.116	95	37.23	59	58.277	221	50.40	124
20	43.021	97	37.82	61	58.056	234	51.64	78
30	42.924	97	38.43	59	57.822	243	52.42	30
Juni 9	42.827	93	39.02	55	57.579	245	52.72	17
19	42.734	87	39.57	51	57.334	239	52.55	63
29	42.647	77	40.08	45	57.095	227	51.92	107
Juli 9	42.570	64	40.53	37	56.868	208	50.85	147
19	42.506	50	40.90	26	56.660	181	49.38	184
29	42.456	32	41.16	14	56.479	147	47.54	214
Aug. 8	42.424	12	41.30	1	56.332	104	45.40	237
18	42.412	12	41.31	16	56.228	56	43.03	252
28	42.424	40	41.15	35	56.172	1	40.51	257
Sept. 7	42.464	71	40.80	56	56.173	62	37.94	253
17	42.535	105	40.24	78	56.235	127	35.41	236
27	42.640	141	39.46	103	56.362	195	33.05	212
Okt. 7	42.781	180	38.43	127	56.557	263	30.93	176
17	42.961	217	37.16	151	56.820	326	29.17	132
27	43.178	253	35.65	174	57.146	383	27.85	81
Nov. 6	43.431	287	33.91	193	57.529	432	27.04	24
16	43.718	313	31.98	208	57.961	467	26.80	35
26	44.031	332	29.90	216	58.428	489	27.15	95
Dez. 6	44.363	342	27.74	220	58.917	495	28.10	153
16	44.705	341	25.54	216	59.412	486	29.63	207
26	45.046	330	23.38	205	59.898	461	31.70	254
36	45.376		21.33		60.359		34.24	
Mittl. Ort	40.960		48.48		56.666		25.10	
sec δ, tg δ	1.006		+0.112		1.706		−1.383	
a, *a'*	+3.1		−19.7		+2.7		−19.7	
b, *b'*	−0.01		−0.18		+0.09		−0.18	

*) Bei Stern 427) und 428) lies März 12

Tag	429) Grb 1771 AR.		429) Grb 1771 Dekl.		433) λ Draconis AR.		433) λ Draconis Dekl.		434) ξ Hydrae AR.		434) ξ Hydrae Dekl.		436) λ Centauri AR.		436) λ Centauri Dekl.	
1933	$11^h\ 18^m$		$+64°\ 41'$		$11^h\ 27^m$		$+69°\ 41'$		$11^h\ 29^m$		$-31°\ 29'$		$11^h\ 32^m$		$-62°\ 38'$	
Jan. 1	56.10	61	31.97	3	30.00	73	43.73	9	42.623	349	4.62	266	40.96	55	41.08	259
11	56.71	57	32.00	63	30.73	68	43.82	69	42.972	318	7.28	283	41.51	49	43.67	300
21	57.28	50	32.63	118	31.41	60	44.51	127	43.290	280	10.11	292	42.00	42	46.67	333
31	57.78	41	33.81	168	32.01	51	45.78	179	43.570	234	13.03	294	42.42	35	50.00	357
Feb. 10	58.19	32	35.49	210	32.52	40	47.57	221	43.804	186	15.97	287	42.77	27	53.57	371
20	58.51	22	37.59	241	32.92	27	49.78	254	43.990	138	18.84	275	43.04	19	57.28	377
März 2	58.73	11	40.00	262	33.19	15	52.32	275	44.128	90	21.59	258	43.23	11	61.05	373
12	58.84	1	42.62	271	33.34	2	55.07	285	44.218	45	24.17	236	43.34	3	64.78	361
21	[12]58.85	8	45.33	269	[14]33.36	9	57.92	282	[15]44.263	5	26.53	211	[16]43.37	4	68.39	343
31	58.77	16	48.02	255	33.27	20	60.74	267	44.268	30	28.64	183	43.33	10	71.82	318
Apr. 10	58.61	24	50.57	231	33.07	29	63.41	243	44.238	59	30.47	154	43.23	16	75.00	287
20	58.37	29	52.88	199	32.78	37	65.84	209	44.179	82	32.01	123	43.07	21	77.87	250
30	58.08	33	54.87	160	32.41	42	67.93	168	44.097	101	33.24	91	42.86	25	80.37	209
Mai 10	57.75	36	56.47	115	31.99	46	69.61	122	43.996	115	34.15	58	42.61	29	82.46	165
20	57.39	38	57.62	68	31.53	49	70.83	72	43.881	123	34.73	25	42.32	32	84.11	117
30	57.01	38	58.30	18	31.04	49	71.55	19	43.758	129	34.98	7	42.00	33	85.28	68
Juni 9	56.63	36	58.48	32	30.55	48	71.74	33	43.629	130	34.91	39	41.67	33	85.96	17
19	56.27	34	58.16	82	30.07	45	71.41	84	43.499	127	34.52	69	41.34	34	86.13	34
29	55.93	31	57.34	129	29.62	42	70.57	134	43.372	120	33.83	98	41.00	33	85.79	83
Juli 9	55.62	27	56.05	173	29.20	38	69.23	182	43.252	110	32.85	122	40.67	31	84.96	129
19	55.35	23	54.32	214	28.82	32	67.41	224	43.142	94	31.63	143	40.36	27	83.67	171
29	55.12	17	52.18	251	28.50	25	65.17	261	43.048	75	30.20	160	40.09	24	81.96	209
Aug. 8	54.95	11	49.67	282	28.25	18	62.56	295	42.973	51	28.60	169	39.85	18	79.87	239
18	54.84	5	46.85	309	28.07	11	59.61	322	42.922	21	26.91	174	39.67	12	77.48	260
28	54.79	1	43.76	329	27.96	3	56.39	343	42.901	14	25.17	170	39.55	5	74.88	272
Sept. 7	54.80	9	40.47	344	27.93	7	52.96	359	42.915	53	23.47	159	39.50	3	72.16	276
17	54.89	16	37.03	353	28.00	15	49.37	366	42.968	95	21.88	140	39.53	12	69.40	266
27	55.05	23	33.50	353	28.15	25	45.71	367	43.063	142	20.48	113	39.65	20	66.74	246
Okt. 7	55.28	31	29.97	348	28.40	34	42.04	359	43.205	189	19.35	79	39.85	29	64.28	215
17	55.59	39	26.49	334	28.74	43	38.45	345	43.394	235	18.56	40	40.14	37	62.13	174
27	55.98	46	23.15	312	29.17	52	35.00	321	43.629	279	18.16	4	40.51	45	60.39	126
Nov. 6	56.44	52	20.03	283	29.69	60	31.79	290	43.908	317	18.20	50	40.96	51	59.13	69
16	56.96	58	17.20	245	30.29	67	28.89	250	44.225	347	18.70	97	41.47	56	58.44	8
26	57.54	61	14.75	200	30.96	73	26.39	204	44.572	369	19.67	143	42.03	60	58.36	53
Dez. 6	58.15	64	12.75	148	31.69	75	24.35	149	44.941	378	21.10	185	42.63	60	58.89	116
16	58.79	65	11.27	93	32.44	76	22.86	91	45.319	377	22.95	221	43.23	60	60.05	174
26	59.44	63	10.34	33	33.20	75	21.95	30	45.696	362	25.16	251	43.83	57	61.79	227
36	60.07		10.01		33.95		21.65		46.058		27.67		44.40		64.06	
Mittl. Ort	53.47		50.87		26.93		63.71		42.126		12.26		40.84		56.40	
sec δ, tg δ	2.340		+2.115		2.882		+2.703		1.173		−0.613		2.177		−1.933	
a, *a'*	+3.6		−19.7		+3.6		−19.8		+3.0		−19.9		+2.8		−19.9	
b, *b'*	−0.14		−0.18		−0.18		−0.14		+0.04		−0.13		+0.13		−0.12	

Scheinbare Sternörter 1933

Tag	437) υ Leonis AR.		437) υ Leonis Dekl		440) 3 Draconis AR.		440) 3 Draconis Dekl.		441) χ Ursae maj. AR.		441) χ Ursae maj. Dekl.		444) β Leonis AR.		444) β Leonis Dekl.	
1933	11h 33m		−0° 27′		11h 38m		+67° 6′		11h 42m		+48° 8′		11h 45m		+14° 56′	
Jan. 1	31.831	323	16.29	216	47.76	67	36.85	14	32.700	440	45.76	79	39.466	336	39.54	182
11	32.154	298	18.45	202	48.43	63	36.71	47	33.140	411	44.97	25	39.802	314	37.72	152
21	32.452	264	20.47	183	49.06	57	37.18	107	33.551	370	44.72	29	40.116	282	36.20	121
31	32.716	226	22.30	161	49.63	48	38.25	159	33.921	319	45.01	79	40.398	243	34.99	86
Feb. 10	32.942	183	23.91	135	50.11	38	39.84	205	34.240	259	45.80	125	40.641	200	34.13	51
20	33.125	139	25.26	108	50.49	28	41.89	241	34.499	194	47.05	164	40.841	155	33.62	18
März 2	33.264	95	26.34	81	50.77	16	44.30	266	34.693	128	48.69	194	40.996	110	33.44	12
12	16 33.359	54	27.15	56	17 50.93	5	46.96	279	18 34.821	64	50.63	214	19 41.106	66	33.56	38
21	33.413	18	27.71	32	50.98	5	49.75	280	34.885	4	52.77	223	41.172	27	33.94	59
31	33.431	14	28.03	11	50.93	14	52.55	270	34.889	50	55.00	225	41.199	7	34.53	75
Apr. 10	33.417	39	28.14	6	50.79	23	55.25	249	34.839	96	57.25	214	41.192	36	35.28	86
20	33.378	60	28.08	21	50.56	30	57.74	219	34.743	133	59.39	197	41.156	59	36.14	90
30	33.318	74	27.87	33	50.26	35	59.93	181	34.610	162	61.36	172	41.097	77	37.04	91
Mai 10	33.244	85	27.54	43	49.91	39	61.74	137	34.448	183	63.08	141	41.020	89	37.95	88
20	33.159	91	27.11	50	49.52	42	63.11	89	34.265	195	64.49	105	40.931	97	38.83	81
30	33.068	93	26.61	55	49.10	43	64.00	39	34.070	199	65.54	67	40.834	100	39.64	71
Juni 9	32.975	92	26.06	58	48.67	42	64.39	13	33.871	198	66.21	26	40.734	101	40.35	59
19	32.883	89	25.48	60	48.25	40	64.26	64	33.673	190	66.47	15	40.633	98	40.94	45
29	32.794	82	24.88	60	47.85	38	63.62	114	33.483	178	66.32	56	40.535	92	41.39	30
Juli 9	32.712	73	24.28	57	47.47	34	62.48	162	33.305	159	65.76	96	40.443	83	41.69	13
19	32.639	61	23.71	52	47.13	30	60.86	205	33.146	138	64.80	135	40.360	72	41.82	4
29	32.578	45	23.19	45	46.83	24	58.81	244	33.008	111	63.45	171	40.288	56	41.78	23
Aug. 8	32.533	25	22.74	35	46.59	18	56.37	280	32.897	79	61.74	204	40.232	38	41.55	43
18	32.508	3	22.39	21	46.41	12	53.57	309	32.818	45	59.70	234	40.194	15	41.12	64
28	32.505	23	22.18	5	46.29	5	50.48	333	32.773	6	57.36	261	40.179	11	40.48	85
Sept. 7	32.528	54	22.13	14	46.24	3	47.15	351	32.767	38	54.75	282	40.190	41	39.63	108
17	32.582	89	22.27	38	46.27	11	43.64	361	32.805	86	51.93	301	40.231	75	38.55	131
27	32.671	126	22.65	63	46.38	20	40.03	366	32.891	137	48.92	312	40.306	113	37.24	153
Okt. 7	32.797	165	23.28	90	46.58	28	36.37	362	33.028	189	45.80	319	40.419	153	35.71	175
17	32.962	204	24.18	118	46.86	37	32.75	351	33.217	244	42.61	320	40.572	195	33.96	195
27	33.166	243	25.36	145	47.23	45	29.24	331	33.461	295	39.41	312	40.767	234	32.01	211
Nov. 6	33.409	277	26.81	170	47.68	52	25.93	302	33.756	344	36.29	297	41.001	271	29.90	225
16	33.686	306	28.51	191	48.20	59	22.91	266	34.100	387	33.32	275	41.272	303	27.65	232
26	33.992	327	30.42	208	48.79	64	20.25	221	34.487	421	30.57	244	41.575	327	25.33	233
Dez. 6	34.319	340	32.50	219	49.43	68	18.04	170	34.908	443	28.13	206	41.902	344	23.00	228
16	34.659	341	34.69	223	50.11	69	16.34	112	35.351	452	26.07	161	42.246	348	20.72	214
26	35.000	332	36.92	221	50.80	68	15.22	52	35.803	447	24.46	112	42.594	344	18.58	196
36	35.332		39.13		51.48		14.70		36.250		23.34		42.938		16.62	
Mittl. Ort	31.088		13.53		45.19		57.24		31.227		63.28		38.632		47.97	
sec δ, tg δ	1.000		−0.008		2.571		+2.369		1.499		+1.116		1.035		+0.267	
a, *a′*	+3.1		−19.9		+3.4		−20.0		+3.2		−20.0		+3.1		−20.0	
b, *b′*	0.00		− 0.12		−0.16		− 0.09		−0.07		− 0.08		−0.02		− 0.06	

Tag	445) β Virginis				447) γ Ursae maj.				450) ο Virginis				452) δ Centauri			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	11h 47m		+2° 8′		11h 50m		+54° 3′		12h 1m		+9° 5′		12h 4m		−50° 20′	
Jan. 1	13.003 s	329	28.13″	212	20.544 s	487	42.88″	69	48.487 s	335	70.78″	199	52.642 s	451	45.46″	235
11	13.332	308	26.01	196	21.031	459	42.19	11	48.822	316	68.79	177	53.093	419	47.81	272
21	13.640	276	24.05	175	21.490	416	42.08	45	49.138	287	67.02	149	53.512	377	50.53	300
31	13.916	238	22.30	150	21.906	360	42.53	99	49.425	251	65.53	119	53.889	327	53.53	320
Feb. 10	14.154	197	20.80	123	22.266	295	43.52	146	49.676	211	64.34	86	54.216	271	56.73	333
20	14.351	154	19.57	94	22.561	224	44.98	187	49.887	168	63.48	55	54.487	214	60.06	335
März 2	14.505	111	18.63	67	22.785	150	46.85	217	50.055	125	62.93	25	54.701	155	63.41	332
12	14.616	70	17.96	41	22.935	77	49.02	237	50.180	83	62.68	3	54.856	99	66.73	321
21*)	[19] 14.686	33	17.55	17	[20] 23.012	8	51.39	247	[23] 50.263	45	62.71	26	[24] 54.955	46	69.94	304
31	14.719	0	17.38	3	23.020	55	53.86	246	50.308	11	62.97	46	55.001	2	72.98	283
Apr. 10	14.719	26	17.41	20	22.965	110	56.32	234	50.319	18	63.43	59	54.999	45	75.81	255
20	14.693	49	17.61	33	22.855	154	58.66	214	50.301	41	64.02	70	54.954	84	78.36	224
30	14.644	65	17.94	44	22.701	191	60.80	186	50.260	60	64.72	75	54.870	118	80.60	189
Mai 10	14.579	77	18.38	51	22.510	217	62.66	152	50.200	75	65.47	76	54.752	145	82.49	151
20	14.502	85	18.89	55	22.293	233	64.18	112	50.125	85	66.23	75	54.607	169	84.00	111
30	14.417	89	19.44	58	22.060	242	65.30	69	50.040	91	66.98	71	54.438	186	85.11	69
Juni 9	14.328	91	20.02	59	21.818	242	65.99	25	49.949	95	67.69	64	54.252	200	85.80	26
19	14.237	89	20.61	57	21.576	235	66.24	20	49.854	94	68.33	56	54.052	206	86.06	18
29	14.148	85	21.18	54	21.341	221	66.04	65	49.760	92	68.89	45	53.846	207	85.88	60
Juli 9	14.063	77	21.72	49	21.120	202	65.39	109	49.668	87	69.34	33	53.639	201	85.28	101
19	13.986	66	22.21	41	20.918	178	64.30	150	49.581	77	69.67	19	53.438	188	84.27	138
29	13.920	53	22.62	32	20.740	148	62.80	189	49.504	65	69.86	5	53.250	168	82.89	171
Aug. 8	13.867	36	22.94	20	20.592	113	60.91	225	49.439	49	69.91	12	53.082	138	81.18	198
18	13.831	13	23.14	6	20.479	74	58.66	257	49.390	29	69.79	31	52.944	101	79.20	218
28	13.818	12	23.20	11	20.405	28	56.09	283	49.361	4	69.48	51	52.843	56	77.02	231
Sept. 7	13.830	42	23.09	32	20.377	20	53.26	306	49.357	26	68.97	72	52.787	3	74.71	233
17	13.872	76	22.77	54	20.397	75	50.20	323	49.383	59	68.25	95	52.784	55	72.38	227
27	13.948	113	22.23	79	20.472	131	46.97	335	49.442	96	67.30	119	52.839	119	70.11	210
Okt. 7	14.061	153	21.44	105	20.603	192	43.62	340	49.538	137	66.11	143	52.958	186	68.01	185
17	14.214	194	20.39	131	20.795	252	40.22	337	49.675	178	64.68	166	53.144	250	66.16	149
27	14.408	233	19.08	157	21.047	312	36.85	328	49.853	219	63.02	188	53.394	312	64.67	105
Nov. 6	14.641	269	17.51	179	21.359	367	33.57	309	50.072	258	61.14	206	53.706	369	63.62	56
16	14.910	301	15.72	199	21.726	416	30.48	283	50.330	292	59.08	219	54.075	414	63.06	3
26	15.211	324	13.73	213	22.142	456	27.65	249	50.622	318	56.89	226	54.489	448	63.03	52
Dez. 6	15.535	339	11.60	222	22.598	483	25.16	206	50.940	336	54.63	229	54.937	468	63.55	108
16	15.874	344	9.38	223	23.081	496	23.10	158	51.276	344	52.34	222	55.405	473	64.63	160
26	16.218	337	7.15	218	23.577	494	21.52	103	51.620	341	50.12	210	55.878	464	66.23	208
36	16.555		4.97		24.071		20.49		51.961		48.02		56.342		68.31	
Mittl. Ort	12.313		32.28		18.941		61.97		47.814		77.88		52.613		57.51	
sec δ, tg δ	1.001		+0.037		1.704		+1.380		1.013		+0.160		1.567		−1.207	
a, *a*′	+3.1		−20.0		+3.2		−20.0		+3.1		−20.0		+3.1		−20.0	
b, *b*′	0.00		−0.06		−0.09		−0.04		−0.01		+0.01		+0.08		+0.02	

*) Bei Stern 450) und 452) lies März 22

Scheinbare Sternörter 1933

Tag	453) ε Corvi				454) 4 H. Draconis				456) δ Ursae maj.				459) β Chamael.			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$12^h\ 6^m$		$-22°\ 14'$		$12^h\ 9^m$		$+77°\ 58'$		$12^h\ 12^m$		$+57°\ 23'$		$12^h\ 14^m$		$-78°\ 56'$	
Jan. 1	$40.^s866$	350	$46.''17$	239	$8.^s68$	117	$55.''77$	25	$8.^s666$	524	$56.''27$	86	$20.^s95$	124	$8.''29$	179
11	41.216	328	48.56	249	9.85	112	55.52	42	9.190	502	55.41	24	22.19	116	10.08	233
21	41.544	297	51.05	253	10.97	104	55.94	104	9.692	463	55.17	35	23.35	104	12.41	281
31	41.841	260	53.58	249	12.01	91	56.98	162	10.155	409	55.52	92	24.39	91	15.22	320
Feb. 10	42.101	219	56.07	240	12.92	75	58.60	212	10.564	344	56.44	144	25.30	75	18.42	351
20	42.320	175	58.47	225	13.67	57	60.72	253	10.908	271	57.88	188	26.05	58	21.93	373
März 2	42.495	132	60.72	206	14.24	38	63.25	282	11.179	194	59.76	224	26.63	41	25.66	385
12	42.627	91	62.78	186	14.62	18	66.07	299	11.373	115	62.00	247	27.04	23	29.51	390
22	[24] 42.718	52	64.64	163	[25] 14.80	3	69.06	304	[26] 11.488	39	64.47	261	[26] 27.27	6	33.41	385
31	42.770	18	66.27	139	14.77	21	72.10	295	11.527	31	67.08	263	27.33	11	37.26	373
Apr. 10	42.788	11	67.66	114	14.56	38	75.05	277	11.496	95	69.71	254	27.22	26	40.99	353
20	42.777	37	68.80	89	14.18	54	77.82	246	11.401	149	72.25	236	26.96	41	44.52	326
30	42.740	57	69.69	65	13.64	67	80.28	209	11.252	194	74.61	209	26.55	54	47.78	293
Mai 10	42.683	74	70.34	40	12.97	77	82.37	163	11.058	228	76.70	174	26.01	66	50.71	253
20	42.609	88	70.74	15	12.20	84	84.00	113	10.830	254	78.44	135	25.35	76	53.24	208
30	42.521	97	70.89	8	11.36	89	85.13	59	10.576	269	79.79	91	24.59	85	55.32	160
Juni 9	42.424	104	70.81	30	10.47	90	85.72	4	10.307	277	80.70	45	23.74	90	56.92	107
19	42.320	107	70.51	52	9.57	90	85.76	51	10.030	275	81.15	2	22.84	94	57.99	53
29	42.213	107	69.99	72	8.67	87	85.25	105	9.755	267	81.13	51	21.90	96	58.52	3
Juli 9	42.106	104	69.27	89	7.80	81	84.20	157	9.488	251	80.62	97	20.94	93	58.49	58
19	42.002	95	68.38	104	6.99	74	82.63	206	9.237	230	79.65	141	20.01	89	57.91	111
29	41.907	84	67.34	114	6.25	66	80.57	249	9.007	201	78.24	184	19.12	81	56.80	161
Aug. 8	41.823	66	66.20	121	5.59	55	78.08	288	8.806	166	76.40	223	18.31	70	55.19	205
18	41.757	45	64.99	123	5.04	44	75.20	322	8.640	126	74.17	258	17.61	56	53.14	243
28	41.712	16	63.76	118	4.60	30	71.98	349	8.514	80	71.59	288	17.05	40	50.71	271
Sept. 7	41.696	17	62.58	108	4.30	16	68.49	369	8.434	28	68.71	314	16.65	21	48.00	291
17	41.713	56	61.50	91	4.14	2	64.80	382	8.406	31	65.57	334	16.44	1	45.09	299
27	41.769	98	60.59	69	4.12	14	60.98	387	8.437	92	62.23	348	16.43	21	42.10	296
Okt. 7	41.867	143	59.90	40	4.26	31	57.11	385	8.529	158	58.75	355	16.64	42	39.14	279
17	42.010	189	59.50	7	4.57	47	53.26	374	8.687	225	55.20	354	17.06	63	36.35	252
27	42.199	234	59.43	29	5.04	62	49.52	354	8.912	292	51.66	347	17.69	83	33.83	214
Nov. 6	42.433	275	59.72	68	5.66	77	45.98	325	9.204	357	48.19	329	18.52	99	31.69	166
16	42.708	310	60.40	107	6.43	90	42.73	287	9.561	414	44.90	303	19.51	113	30.03	110
26	43.018	337	61.47	144	7.33	102	39.86	241	9.975	463	41.87	269	20.64	123	28.93	50
Dez. 6	43.355	356	62.91	178	8.35	110	37.45	187	10.438	499	39.18	226	21.87	129	28.43	15
16	43.711	362	64.69	205	9.45	116	35.58	128	10.937	521	36.92	176	23.16	131	28.58	79
26	44.073	357	66.74	228	10.61	117	34.30	64	11.458	526	35.16	121	24.47	128	29.37	141
36	44.430		69.02		11.78		33.66		11.984		33.95		25.75		30.78	
Mittl. Ort	40.516		49.83		4.98		78.60		7.180		76.97		22.56		25.03	
sec δ, tg δ	1.080		−0.409		4.805		+4.699		1.856		+1.564		5.214		−5.117	
a, a'	+3.1		−20.0		+2.8		−20.0		+3.0		−20.0		+3.5		−20.0	
b, b'	+0.03		+ 0.03		−0.31		+ 0.04		−0.10		+ 0.05		+0.34		+ 0.06	

Tag	460) η Virginis AR.	Δ	Dekl.	Δ
1933	12h 16m		−0° 17′	
Jan. 1	29.136	335	44.93	217
11	29.471	319	47.10	204
21	29.790	291	49.14	186
31	30.081	259	51.00	163
Feb. 10	30.340	220	52.63	137
20	30.560	180	54.00	110
März 2	30.740	138	55.10	81
12	30.878	98	55.91	55
22	[27] 30.976	61	56.46	30
31	31.037	29	56.76	9
Apr. 10	31.066	1	56.85	10
20	31.065	25	56.75	25
30	31.040	45	56.50	37
Mai 10	30.995	61	56.13	47
20	30.934	73	55.66	53
30	30.861	82	55.13	57
Juni 9	30.779	88	54.56	59
19	30.691	92	53.97	59
29	30.599	92	53.38	58
Juli 9	30.507	89	52.80	54
19	30.418	83	52.26	49
29	30.335	74	51.77	41
Aug. 8	30.261	59	51.36	31
18	30.202	41	51.05	18
28	30.161	17	50.87	2
Sept. 7	30.144	12	50.85	17
17	30.156	45	51.02	38
27	30.201	83	51.40	62
Okt. 7	30.284	123	52.02	88
17	30.407	166	52.90	115
27	30.573	209	54.05	141
Nov. 6	30.782	248	55.46	167
16	31.030	284	57.13	188
26	31.314	311	59.01	205
Dez. 6	31.625	332	61.06	217
16	31.957	341	63.23	222
26	32.298	340	65.45	220
36	32.638		67.65	
Mittl. Ort	28.641		40.60	
sec δ, tg δ	1.000		−0.005	
a, a′	+3.1		−20.0	
b, b′	0.00		+ 0.07	

Tag	462) α Crucis med. AR.	Δ	Dekl.	Δ
1933	12h 22m		−62° 43′	
Jan. 1	51.25	60	27.97	198
11	51.85	56	29.95	245
21	52.41	51	32.40	285
31	52.92	45	35.25	317
Feb. 10	53.37	38	38.42	339
20	53.75	31	41.81	354
März 2	54.06	23	45.35	360
12	54.29	16	48.95	358
22	[28] 54.45	8	52.53	349
31	54.53	2	56.02	333
Apr. 10	54.55	5	59.35	310
20	54.50	11	62.45	282
30	54.39	16	65.27	248
Mai 10	54.23	20	67.75	211
20	54.03	25	69.86	169
30	53.78	28	71.55	123
Juni 9	53.50	31	72.78	76
19	53.19	33	73.54	26
29	52.86	33	73.80	23
Juli 9	52.53	33	73.57	71
19	52.20	31	72.86	118
29	51.89	29	71.68	160
Aug. 8	51.60	25	70.08	197
18	51.35	20	68.11	228
28	51.15	14	65.83	251
Sept. 7	51.01	7	63.32	264
17	50.94	2	60.68	266
27	50.96	11	58.02	258
Okt. 7	51.07	20	55.44	240
17	51.27	29	53.04	209
27	51.56	38	50.95	171
Nov. 6	51.94	45	49.24	122
16	52.39	52	48.02	69
26	52.91	58	47.33	10
Dez. 6	53.49	60	47.23	50
16	54.09	62	47.73	108
26	54.71	61	48.81	165
36	55.32		50.46	
Mittl. Ort	51.70		42.20	
sec δ, tg δ	2.183		−1.940	
a, a′	+3.3		−19.9	
b, b′	+0.13		+ 0.10	

Tag	466) 20 Comae AR.	Δ	Dekl.	Δ
1933	12h 26m		+21° 15′	
Jan. 1	22.083	354	48.65	186
11	22.437	338	46.79	151
21	22.775	314	45.28	112
31	23.089	281	44.16	72
Feb. 10	23.370	241	43.44	31
20	23.611	198	43.13	9
März 2	23.809	154	43.22	43
12	23.963	110	43.65	74
22	[29] 24.073	69	44.39	99
31	24.142	31	45.38	116
Apr. 10	24.173	2	46.54	127
20	24.171	30	47.81	132
30	24.141	54	49.13	131
Mai 10	24.087	74	50.44	123
20	24.013	87	51.67	112
30	23.926	98	52.79	97
Juni 9	23.828	106	53.76	78
19	23.722	109	54.54	58
29	23.613	109	55.12	35
Juli 9	23.504	107	55.47	12
19	23.397	100	55.59	13
29	23.297	90	55.46	38
Aug. 8	23.207	75	55.08	63
18	23.132	57	54.45	89
28	23.075	32	53.56	115
Sept. 7	23.043	3	52.41	141
17	23.040	31	51.00	165
27	23.071	69	49.35	188
Okt. 7	23.140	112	47.47	211
17	23.252	156	45.36	229
27	23.408	200	43.07	245
Nov. 6	23.608	244	40.62	255
16	23.852	282	38.07	258
26	24.134	314	35.49	256
Dez. 6	24.448	339	32.93	246
16	24.787	352	30.47	228
26	25.139	356	28.19	204
36	25.495		26.15	
Mittl. Ort	21.437		60.73	
sec δ, tg δ	1.073		+0.389	
a, a′	+3.0		−19.9	
b, b′	−0.03		+ 0.11	

Tag	465) δ Corvi AR.	Δ	Dekl.	Δ
1933	12h 26m		−16° 8′	
Jan. 1	23.968	347	32.50	227
11	24.315	329	34.77	233
21	24.644	304	37.10	231
31	24.948	270	39.41	223
Feb. 10	25.218	232	41.64	209
20	25.450	192	43.73	192
März 2	25.642	151	45.65	172
12	25.793	111	47.37	149
22	[29] 25.904	73	48.86	127
31	25.977	40	50.13	104
Apr. 10	26.017	11	51.17	81
20	26.028	16	51.98	60
30	26.012	37	52.58	39
Mai 10	25.975	56	52.97	19
20	25.919	71	53.16	0
30	25.848	83	53.16	17
Juni 9	25.765	91	52.99	34
19	25.674	98	52.65	49
29	25.576	101	52.16	62
Juli 9	25.475	101	51.54	74
19	25.374	96	50.80	83
29	25.278	88	49.97	89
Aug. 8	25.190	74	49.08	92
18	25.116	56	48.16	90
28	25.060	30	47.26	84
Sept. 7	25.030	0	46.42	72
17	25.030	35	45.70	56
27	25.065	75	45.14	34
Okt. 7	25.140	119	44.80	8
17	25.259	165	44.72	22
27	25.424	210	44.94	55
Nov. 6	25.634	252	45.49	89
16	25.886	290	46.38	123
26	26.176	320	47.61	154
Dez. 6	26.496	341	49.15	181
16	26.837	352	50.96	204
26	27.189	351	53.00	220
36	27.540		55.20	
Mittl. Ort	23.677		33.44	
sec δ, tg δ	1.041		−0.290	
a, a′	+3.1		−19.9	
b, b′	+0.02		+ 0.11	

Scheinbare Sternörter 1933

Tag	470) 8 Canum ven. AR.		470) Dekl.		472) κ Draconis AR.		472) Dekl.	
1933	12ʰ 30ᵐ		+41° 42′		12ʰ 30ᵐ		+70° 8′	
Jan. 1	34.830	410	58.19	145	39.95	76	63.18	75
11	35.240	396	56.74	93	40.71	74	62.43	9
21	35.636	368	55.81	40	41.45	70	62.34	55
31	36.004	331	55.41	15	42.15	62	62.89	116
Feb. 10	36.335	285	55.56	65	42.77	54	64.05	172
20	36.620	233	56.21	111	43.31	43	65.77	218
März 2	36.853	179	57.32	150	43.74	31	67.95	255
12	37.032	123	58.82	182	44.05	19	70.50	280
22	37.155	69	60.64	203	44.24	7	73.30	294
31	37.224	20	62.67	216	44.31	5	76.24	294
Apr. 10	37.244	25	64.83	218	44.26	15	79.18	284
20	37.219	63	67.01	212	44.11	25	82.02	262
30	37.156	97	69.13	197	43.86	34	84.64	232
Mai 10	37.059	122	71.10	176	43.52	40	86.96	194
20	36.937	142	72.86	148	43.12	45	88.90	149
30	36.795	157	74.34	116	42.67	49	90.39	99
Juni 9	36.638	166	75.50	81	42.18	51	91.38	48
19	36.472	171	76.31	44	41.67	52	91.86	5
29	36.301	169	76.75	5	41.15	51	91.81	58
Juli 9	36.132	164	76.80	35	40.64	49	91.23	110
19	35.968	155	76.45	74	40.15	46	90.13	160
29	35.813	139	75.71	112	39.69	41	88.53	206
Aug. 8	35.674	120	74.59	148	39.28	36	86.47	249
18	35.554	96	73.11	182	38.92	30	83.98	286
28	35.458	65	71.29	215	38.62	22	81.12	319
Sept. 7	35.393	29	69.14	243	38.40	14	77.93	345
17	35.364	13	66.71	268	38.26	6	74.48	365
27	35.377	57	64.03	290	38.20	4	70.83	377
Okt. 7	35.434	108	61.13	306	38.24	15	67.06	383
17	35.542	161	58.07	316	38.39	25	63.23	380
27	35.703	213	54.91	319	38.64	35	59.43	368
Nov. 6	35.916	265	51.72	316	38.99	45	55.75	347
16	36.181	312	48.56	304	39.44	55	52.28	316
26	36.493	353	45.52	284	39.99	63	49.12	277
Dez. 6	36.846	383	42.68	254	40.62	69	46.35	229
16	37.229	402	40.14	218	41.31	73	44.06	174
26	37.631	410	37.96	174	42.04	76	42.32	113
36	38.041		36.22		42.80		41.19	
Mittl. Ort	33.942		76.32		38.03		86.33	
sec δ, tg δ	1.340		+0.892		2.946		+2.771	
a, *a′*	+2.9		−19.9		+2.6		−19.9	
b, *b′*	−0.06		+ 0.13		−0.18		+ 0.13	

Tag	471) β Corvi AR.		471) Dekl.		473) 24 Comae sq. AR.		473) Dekl.	
1933	12ʰ 30ᵐ		−23° 1′		12ʰ 31ᵐ		+18° 44′	
Jan. 1	51.973	358	32.14	226	46.826	350	32.89	192
11	52.331	341	34.40	239	47.176	337	30.97	160
21	52.672	315	36.79	244	47.513	312	29.37	124
31	52.987	281	39.23	243	47.825	281	28.13	85
Feb. 10	53.268	242	41.66	235	48.106	243	27.28	45
20	53.510	202	44.01	223	48.349	201	26.83	7
März 2	53.712	160	46.24	207	48.550	158	26.76	29
12	53.872	119	48.31	188	48.708	115	27.05	59
22	53.991	80	50.19	167	48.823	74	27.64	85
31	54.071	46	51.86	144	48.897	38	28.49	103
Apr. 10	54.117	14	53.30	121	48.935	5	29.52	117
20	54.131	13	54.51	97	48.940	23	30.69	122
30	54.118	36	55.48	74	48.917	47	31.91	123
Mai 10	54.082	56	56.22	50	48.870	66	33.14	118
20	54.026	73	56.72	27	48.804	81	34.32	109
30	53.953	87	56.99	4	48.723	93	35.41	96
Juni 9	53.866	98	57.03	18	48.630	100	36.37	80
19	53.768	105	56.85	39	48.530	105	37.17	62
29	53.663	110	56.46	59	48.425	107	37.79	42
Juli 9	53.553	110	55.87	77	48.318	105	38.21	20
19	53.443	106	55.10	93	48.213	100	38.41	3
29	53.337	98	54.17	105	48.113	91	38.38	26
Aug. 8	53.239	85	53.12	114	48.022	77	38.12	51
18	53.154	65	51.98	117	47.945	60	37.61	75
28	53.089	39	50.81	116	47.885	35	36.86	100
Sept. 7	53.050	7	49.65	109	47.850	8	35.86	125
17	53.043	31	48.56	94	47.842	25	34.61	150
27	53.074	72	47.62	76	47.867	64	33.11	174
Okt. 7	53.146	119	46.86	49	47.931	106	31.37	197
17	53.265	167	46.37	19	48.037	149	29.40	218
27	53.432	214	46.18	15	48.186	194	27.22	233
Nov. 6	53.646	259	46.33	52	48.380	238	24.89	246
16	53.905	298	46.85	91	48.618	276	22.43	253
26	54.203	330	47.76	127	48.894	309	19.90	253
Dez. 6	54.533	351	49.03	160	49.203	333	17.37	245
16	54.884	364	50.63	190	49.536	348	14.92	230
26	55.248	363	52.53	214	49.884	352	12.62	209
36	55.611		54.67		50.236		10.53	
Mittl. Ort	51.775		35.30		46.243		44.34	
sec δ, tg δ	1.087		−0.425		1.056		+0.339	
a, *a′*	+3.1		−19.9		+3.0		−19.9	
b, *b′*	+0.03		+ 0.13		−0.02		+ 0.14	

Tag	474) α Muscae AR.	Diff.	474) α Muscae Dekl.	Diff.	476) γ Centauri AR.	Diff.	476) γ Centauri Dekl.	Diff.
1933	12h 33m		−68° 45′		12h 37m		−48° 35′	
	s		″		s		″	
Jan. 1	9.24	74	45.49	173	48.452	456	21.03	201
11	9.98	69	47.22	226	48.908	435	23.04	239
21	10.67	64	49.48	270	49.343	401	25.43	270
31	11.31	57	52.18	306	49.744	360	28.13	292
Feb. 10	11.88	48	55.24	335	50.104	311	31.05	306
20	12.36	40	58.59	355	50.415	259	34.11	314
März 2	12.76	31	62.14	367	50.674	205	37.25	314
12	13.07	21	65.81	369	50.879	153	40.39	308
22	13.28	12	69.50	364	51.032	102	43.47	296
31*)	[31] 13.40	4	73.14	352	51.134	54	46.43	278
Apr. 10	13.44	5	76.66	333	[1] 51.188	10	49.21	255
20	13.39	13	79.99	308	51.198	30	51.76	230
30	13.26	20	83.07	276	51.168	67	54.06	199
Mai 10	13.06	26	85.83	239	51.101	99	56.05	166
20	12.80	32	88.22	198	51.002	127	57.71	130
30	12.48	37	90.20	152	50.875	151	59.01	92
Juni 9	12.11	40	91.72	104	50.724	171	59.93	52
19	11.71	43	92.76	53	50.553	185	60.45	12
29	11.28	45	93.29	0	50.368	195	60.57	29
Juli 9	10.83	45	93.29	51	50.173	197	60.28	69
19	10.38	43	92.78	101	49.976	192	59.59	107
29	9.95	40	91.77	148	49.784	181	58.52	140
Aug. 8	9.55	36	90.29	189	49.603	159	57.12	170
18	9.19	29	88.40	226	49.444	130	55.42	193
28	8.90	22	86.14	253	49.314	92	53.49	209
Sept. 7	8.68	13	83.61	271	49.222	44	51.40	218
17	8.55	2	80.90	280	49.178	10	49.22	217
27	8.53	10	78.10	276	49.188	70	47.05	207
Okt. 7	8.63	21	75.34	262	49.258	136	44.98	187
17	8.84	32	72.72	237	49.394	202	43.11	158
27	9.16	44	70.35	200	49.596	267	41.53	121
Nov. 6	9.60	54	68.35	154	49.863	327	40.32	77
16	10.14	62	66.81	101	50.190	378	39.55	29
26	10.76	69	65.80	44	50.568	421	39.26	24
Dez. 6	11.45	73	65.36	17	50.989	448	39.50	75
16	12.18	76	65.53	79	51.437	464	40.25	126
26	12.94	75	66.32	138	51.901	464	41.51	174
36	13.69		67.70		52.365		43.25	
Mittl. Ort	10.11		60.44		48.654		31.67	
sec δ, tg δ	2.762		−2.574		1.512		−1.134	
a, a′	+3.6		−19.8		+3.3		−19.8	
b, b′	+0.17		+ 0.14		+0.07		+ 0.16	

Tag	478) 76 Ursae maj. AR.	Diff.	478) 76 Ursae maj. Dekl.	Diff.	481) β Crucis AR.	Diff.	481) β Crucis Dekl.	Diff.
1933	12h 38m		+63° 4′		12h 43m		−59° 19′	
	s		″		s		″	
Jan. 1	40.13	60	27.81	103	46.947	562	9.35	177
11	40.73	59	26.78	40	47.509	536	11.12	224
21	41.32	55	26.38	24	48.045	498	13.36	263
31	41.87	50	26.62	85	48.543	447	15.99	295
Feb. 10	42.37	43	27.47	142	48.990	388	18.94	318
20	42.80	35	28.89	191	49.378	325	22.12	335
März 2	43.15	27	30.80	231	49.703	259	25.47	342
12	43.42	18	33.11	259	49.962	193	28.89	342
22	43.60	8	35.70	278	50.155	128	32.31	335
31*)	43.68	0	38.48	284	50.283	66	35.66	322
Apr. 10	[1] 43.68	8	41.32	278	[3] 50.349	7	38.88	302
20	43.60	15	44.10	261	50.356	47	41.90	278
30	43.45	22	46.71	237	50.309	97	44.68	247
Mai 10	43.23	26	49.08	203	50.212	143	47.15	214
20	42.97	30	51.11	162	50.069	183	49.29	174
30	42.67	34	52.73	118	49.886	218	51.03	133
Juni 9	42.33	35	53.91	69	49.668	247	52.36	89
19	41.98	36	54.60	19	49.421	268	53.25	42
29	41.62	36	54.79	32	49.153	283	53.67	5
Juli 9	41.26	34	54.47	83	48.870	286	53.62	51
19	40.92	33	53.64	131	48.584	283	53.11	97
29	40.59	30	52.33	177	48.301	266	52.14	139
Aug. 8	40.29	26	50.56	220	48.035	238	50.75	175
18	40.03	22	48.36	259	47.797	199	49.00	208
28	39.81	17	45.77	294	47.598	148	46.92	232
Sept. 7	39.64	11	42.83	322	47.450	87	44.60	247
17	39.53	4	39.61	346	47.363	14	42.13	253
27	39.49	3	36.15	362	47.349	64	39.60	249
Okt. 7	39.52	11	32.53	372	47.413	149	37.11	234
17	39.63	19	28.81	374	47.562	234	34.77	207
27	39.82	27	25.07	367	47.796	316	32.70	173
Nov. 6	40.09	35	21.40	351	48.112	392	30.97	129
16	40.44	42	17.89	326	48.504	459	29.68	78
26	40.86	49	14.63	292	48.963	512	28.90	24
Dez. 6	41.35	54	11.71	248	49.475	549	28.66	33
16	41.89	58	9.23	198	50.024	569	28.99	90
26	42.47	59	7.25	140	50.593	570	29.89	145
36	43.06		5.85		51.163		31.34	
Mittl. Ort	38.77		50.40		47.486		22.25	
sec δ, tg δ	2.209		+1.969		1.960		−1.686	
a, a′	+2.6		−19.8		+3.5		−19.7	
b, b′	−0.13		+ 0.17		+0.11		+ 0.19	

*) Bei Stern 476), 478) und 481) lies April 1

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Tag	482) *n* Centauri AR.		482) Dekl.		483) ε Ursae maj. AR.		483) Dekl.		484) δ Virginis AR.		484) Dekl.		486) 8 Draconis AR.		486) Dekl.	
1933	12h 49m		−39° 48′		12h 51m		+56° 18′		12h 52m		+3° 45′		12h 52m		+65° 47′	
	s		″		s		″		s		″		s		″	
Jan. 1	42.900	413	46.22	200	6.227	511	61.44	134	13.974	340	32.95	214	50.12	64	42.48	115
11	43.313	397	48.22	231	6.738	501	60.10	74	14.314	329	30.81	198	50.76	64	41.33	50
21	43.710	370	50.53	254	7.239	475	59.36	11	14.643	309	28.83	176	51.40	61	40.83	15
31	44.080	335	53.07	270	7.714	435	59.25	49	14.952	281	27.07	150	52.01	56	40.98	78
Feb. 10	44.415	294	55.77	278	8.149	382	59.74	107	15.233	248	25.57	120	52.57	49	41.76	137
20	44.709	249	58.55	281	8.531	319	60.81	159	15.481	211	24.37	89	53.06	40	43.13	189
März 2	44.958	203	61.36	277	8.850	250	62.40	202	15.692	171	23.48	59	53.46	32	45.02	231
12	45.161	157	64.13	268	9.100	177	64.42	234	15.863	133	22.89	30	53.78	22	47.33	262
22	45.318	113	66.81	253	9.277	104	66.76	258	15.996	96	22.59	3	54.00	12	49.95	284
Apr. 1	45.431	72	69.34	236	9.381	35	69.34	269	16.092	63	22.56	19	54.12	2	52.79	291
10	45.503	33	71.70	214	9.416	30	72.03	269	16.155	31	22.75	37	54.14	7	55.70	288
20	45.536	1	73.84	189	9.386	88	74.72	259	16.186	5	23.12	52	54.07	15	58.58	273
30	45.535	33	75.73	163	9.298	140	77.31	239	16.191	19	23.64	62	53.92	22	61.31	250
Mai 10	45.502	60	77.36	134	9.158	182	79.70	211	16.172	39	24.26	68	53.70	29	63.81	216
20	45.442	86	78.70	102	8.976	216	81.81	176	16.133	56	24.94	71	53.41	33	65.97	177
30	45.356	108	79.72	70	8.760	243	83.57	136	16.077	71	25.65	72	53.08	37	67.74	133
Juni 9	45.248	126	80.42	37	8.517	261	84.93	92	16.006	82	26.37	70	52.71	40	69.07	83
19	45.122	140	80.79	3	8.256	271	85.85	46	15.924	90	27.07	65	52.31	41	69.90	32
29	44.982	150	80.82	31	7.985	275	86.31	3	15.834	96	27.72	58	51.90	41	70.22	20
Juli 9	44.832	156	80.51	64	7.710	270	86.28	51	15.738	100	28.30	49	51.49	41	70.02	71
19	44.676	154	79.87	95	7.440	260	85.77	98	15.638	98	28.79	40	51.08	40	69.31	122
29	44.522	147	78.92	122	7.180	242	84.79	144	15.540	94	29.19	29	50.68	36	68.09	170
Aug. 8	44.375	133	77.70	146	6.938	217	83.35	187	15.446	84	29.48	14	50.32	33	66.39	215
18	44.242	110	76.24	164	6.721	185	81.48	227	15.362	70	29.62	1	49.99	28	64.24	255
28	44.132	81	74.60	176	6.536	145	79.21	263	15.292	50	29.61	19	49.71	23	61.69	293
Sept. 7	44.051	42	72.84	181	6.391	99	76.58	294	15.242	23	29.42	39	49.48	16	58.76	322
17	44.009	3	71.03	177	6.292	46	73.64	321	15.219	8	29.03	61	49.32	9	55.54	348
27	44.012	55	69.26	167	6.246	13	70.43	342	15.227	45	28.42	84	49.23	1	52.06	367
Okt. 7	44.067	111	67.59	147	6.259	78	67.01	357	15.272	85	27.58	109	49.22	7	48.39	378
17	44.178	169	66.12	119	6.337	146	63.44	363	15.357	130	26.49	134	49.29	16	44.61	380
27	44.347	226	64.93	84	6.483	216	59.81	362	15.487	175	25.15	159	49.45	25	40.81	376
Nov. 6	44.573	281	64.09	44	6.699	285	56.19	353	15.662	218	23.56	182	49.70	34	37.05	361
16	44.854	330	63.65	0	6.984	349	52.66	333	15.880	257	21.74	200	50.04	43	33.44	337
26	45.184	368	63.65	47	7.333	406	49.33	305	16.137	292	19.74	214	50.47	50	30.07	303
Dez. 6	45.552	398	64.12	93	7.739	453	46.28	268	16.429	318	17.60	223	50.97	56	27.04	260
16	45.950	414	65.05	136	8.192	486	43.60	222	16.747	334	15.37	225	51.53	61	24.44	210
26	46.364	417	66.41	177	8.678	504	41.38	169	17.081	340	13.12	219	52.14	64	22.34	151
36	46.781		68.18		9.182		39.69		17.421		10.93		52.78		20.83	
Mittl. Ort	43.030		54.06		5.258		83.36		13.656		39.93		48.87		65.86	
sec δ, tg δ	1.302		−0.834		1.803		+1.501		1.002		+0.066		2.440		+2.225	
a, *a*′	+3.3		−19.6		+2.6		−19.5		+3.1		−19.5		+2.4		−19.5	
b, *b*′	+0.05		+ 0.22		−0.10		+ 0.22		0.00		+ 0.23		−0.14		+ 0.23	

Tag	485) 12 Can. ven. sq. AR.		Dekl.		488) ε Virginis AR.		Dekl.		490) ϑ Virginis AR.		Dekl.		492) 43 Comae AR.		Dekl.	
1933	12h 52m		+38° 40′		12h 58m		+11° 18′		13h 6m		−5° 10′		13h 8m		+28° 12′	
Jan. 1	54.471	398	29.32	172	50.842	343	58.09	210	28.880	343	58.77	215	45.334	365	46.82	197
11	54.869	388	27.60	122	51.185	335	55.99	186	29.223	334	60.92	208	45.699	358	44.85	156
21	55.257	367	26.38	70	51.520	315	54.13	157	29.557	316	63.00	197	46.057	341	43.29	112
31	55.624	336	25.68	16	51.835	289	52.56	123	29.873	290	64.97	179	46.398	315	42.17	63
Feb. 10	55.960	296	25.52	36	52.124	256	51.33	87	30.163	259	66.76	157	46.713	281	41.54	15
20	56.256	249	25.88	85	52.380	218	50.46	52	30.422	224	68.33	133	46.994	242	41.39	30
März 2	56.505	199	26.73	127	52.598	180	49.94	17	30.646	186	69.66	107	47.236	199	41.69	72
12	56.704	148	28.00	162	52.778	140	49.77	15	30.832	149	70.73	81	47.435	155	42.41	109
22	56.852	98	29.62	189	52.918	102	49.92	42	30.981	114	71.54	56	47.590	112	43.50	138
Apr. 1	56.950	50	31.51	205	53.020	67	50.34	65	31.095	80	72.10	34	47.702	72	44.88	161
10	57.000	7	33.56	214	53.087	35	50.99	81	31.175	49	72.44	14	47.774	33	46.49	174
20	57.007	31	35.70	212	53.122	7	51.80	94	31.224	22	72.58	4	47.807	1	48.23	180
30	56.976	66	37.82	203	53.129	18	52.74	100	31.246	2	72.54	18	47.806	30	50.03	179
Mai 10	56.910	93	39.85	186	53.111	40	53.74	102	31.244	24	72.36	30	47.776	56	51.82	169
20	56.817	117	41.71	162	53.071	57	54.76	99	31.220	43	72.06	40	47.720	79	53.51	156
30	56.700	134	43.33	134	53.014	73	55.75	93	31.177	60	71.66	47	47.641	97	55.07	136
Juni 9	56.566	148	44.67	102	52.941	86	56.68	84	31.117	74	71.19	52	47.544	111	56.43	112
19	56.418	157	45.69	67	52.855	94	57.52	72	31.043	85	70.67	56	47.433	123	57.55	85
29	56.261	161	46.36	30	52.761	101	58.24	58	30.958	94	70.11	58	47.310	130	58.40	57
Juli 9	56.100	160	46.66	9	52.660	105	58.82	42	30.864	99	69.53	57	47.180	135	58.97	26
19	55.940	156	46.57	47	52.555	104	59.24	26	30.765	102	68.96	56	47.045	134	59.23	6
29	55.784	147	46.10	85	52.451	101	59.50	7	30.663	99	68.40	52	46.911	129	59.17	38
Aug. 8	55.637	131	45.25	121	52.350	91	59.57	13	30.564	93	67.88	46	46.782	120	58.79	70
18	55.506	112	44.04	157	52.259	77	59.44	34	30.471	79	67.42	37	46.662	105	58.09	102
28	55.394	85	42.47	191	52.182	57	59.10	56	30.392	60	67.05	26	46.557	84	57.07	133
Sept. 7	55.309	53	40.56	222	52.125	32	58.54	80	30.332	35	66.79	11	46.473	57	55.74	163
17	55.256	14	38.34	250	52.093	1	57.74	104	30.297	4	66.68	8	46.416	24	54.11	192
27	55.242	29	35.84	274	52.092	36	56.70	129	30.293	33	66.76	29	46.392	16	52.19	218
Okt. 7	55.271	77	33.10	294	52.128	78	55.41	153	30.326	75	67.05	53	46.408	59	50.01	242
17	55.348	128	30.16	309	52.206	121	53.88	176	30.401	120	67.58	79	46.467	106	47.59	262
27	55.476	182	27.07	317	52.327	167	52.12	198	30.521	166	68.37	106	46.573	156	44.97	277
Nov. 6	55.658	234	23.90	318	52.494	211	50.14	217	30.687	211	69.43	133	46.729	205	42.20	285
16	55.892	282	20.72	311	52.705	252	47.97	230	30.898	253	70.76	158	46.934	250	39.35	288
26	56.174	325	17.61	296	52.957	288	45.67	238	31.151	288	72.34	179	47.184	291	36.47	283
Dez. 6	56.499	359	14.65	271	53.245	316	43.29	240	31.439	316	74.13	197	47.475	324	33.64	270
16	56.858	383	11.94	239	53.561	334	40.89	233	31.755	334	76.10	209	47.799	348	30.94	247
26	57.241	393	9.55	199	53.895	342	38.56	221	32.089	343	78.19	213	48.147	360	28.47	217
36	57.634		7.56		54.237		36.35		32.432		80.32		48.507		26.30	
Mittl. Ort	53.821		47.40		50.501		67.91		28.721		54.51		44.918		62.38	
sec δ, tg δ	1.281		+0.801		1.020		+0.200		1.004		−0.091		1.135		+0.537	
a, a′	+2.8		−19.5		+3.0		−19.4		+3.1		−19.2		+2.9		−19.1	
b, b′	−0.05		+ 0.23		−0.01		+ 0.25		+0.01		+ 0.29		−0.03		+ 0.30	

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Tag	495) γ Hydrae AR.		Dekl.		496) ι Centauri AR.		Dekl.		497) ζ Ursae maj. pr. AR.		Dekl.		498) α Virginis AR.		Dekl.	
1933	$13^h\ 15^m$		$-22°49'$		$13^h\ 16^m$		$-36°21'$		$13^h\ 21^m$		$+55°15'$		$13^h\ 21^m$		$-10°48'$	
Jan. 1	16.426	366	5.66	200	49.089	403	28.28	179	14.480	491	66.91	171	39.638	347	46.59	207
11	16.792	356	7.66	213	49.492	393	30.07	207	14.971	492	65.20	111	39.985	341	48.66	209
21	17.148	339	9.79	220	49.885	374	32.14	229	15.463	476	64.09	49	40.326	325	50.75	202
31	17.487	312	11.99	221	50.259	345	34.43	244	15.939	446	63.60	15	40.651	301	52.77	192
Feb. 10	17.799	280	14.20	217	50.604	309	36.87	251	16.385	403	63.75	75	40.952	272	54.69	175
20	18.079	244	16.37	206	50.913	271	39.38	254	16.788	348	64.50	131	41.224	238	56.44	155
März 2	18.323	207	18.43	194	51.184	228	41.92	251	17.136	286	65.81	180	41.462	203	57.99	134
12	18.530	169	20.37	177	51.412	187	44.43	242	17.422	220	67.61	220	41.665	166	59.33	110
22	18.699	131	22.14	158	51.599	146	46.85	230	17.642	152	69.81	249	41.831	131	60.43	88
Apr. 1	18.830	96	23.72	139	51.745	106	49.15	214	17.794	85	72.30	268	41.962	98	61.31	66
11	$_{11}$18.926	64	25.11	118	$_{11}$51.851	69	51.29	196	$_{12}$17.879	20	74.98	275	$_{12}$42.060	66	61.97	46
20	18.990	35	26.29	98	51.920	35	53.25	174	17.899	40	77.73	272	42.126	39	62.43	27
30	19.025	7	27.27	78	51.955	2	54.99	152	17.859	94	80.45	258	42.165	13	62.70	11
Mai 10	19.032	17	28.05	58	51.957	27	56.51	127	17.765	141	83.03	236	42.178	11	62.81	3
20	19.015	40	28.63	38	51.930	54	57.78	100	17.624	181	85.39	205	42.167	32	62.78	16
30	18.975	60	29.01	18	51.876	78	58.78	72	17.443	214	87.44	169	42.135	51	62.62	27
Juni 9	18.915	78	29.19	1	51.798	101	59.50	44	17.229	240	89.13	128	42.084	67	62.35	37
19	18.837	93	29.18	21	51.697	119	59.94	14	16.989	258	90.41	82	42.017	82	61.98	45
29	18.744	106	28.97	38	51.578	134	60.08	16	16.731	271	91.23	35	41.935	94	61.53	51
Juli 9	18.638	114	28.59	55	51.444	144	59.92	45	16.460	275	91.58	13	41.841	103	61.02	57
19	18.524	118	28.04	71	51.300	149	59.47	73	16.185	273	91.45	61	41.738	107	60.45	60
29	18.406	117	27.33	84	51.151	148	58.74	98	15.912	263	90.84	109	41.631	108	59.85	62
Aug. 8	18.289	110	26.49	94	51.003	140	57.76	120	15.649	247	89.75	154	41.523	101	59.23	61
18	18.179	97	25.55	100	50.863	123	56.56	139	15.402	221	88.21	197	41.422	92	58.62	57
28	18.082	76	24.55	102	50.740	99	55.17	151	15.181	189	86.24	238	41.330	74	58.05	49
Sept. 7	18.006	49	23.53	99	50.641	67	53.66	157	14.992	147	83.86	273	41.256	49	57.56	40
17	17.957	15	22.54	90	50.574	25	52.09	156	14.845	99	81.13	304	41.207	17	57.16	24
27	17.942	27	21.64	75	50.549	22	50.53	149	14.746	43	78.09	331	41.190	19	56.92	6
Okt. 7	17.969	73	20.89	56	50.571	75	49.04	132	14.703	20	74.78	350	41.209	61	56.86	17
17	18.042	122	20.33	30	50.646	132	47.72	109	14.723	87	71.28	363	41.270	108	57.03	42
27	18.164	172	20.03	0	50.778	189	46.63	79	14.810	157	67.65	368	41.378	155	57.45	69
Nov. 6	18.336	221	20.03	33	50.967	244	45.84	43	14.967	228	63.97	364	41.533	203	58.14	98
16	18.557	267	20.36	66	51.211	296	45.41	3	15.195	295	60.33	351	41.736	245	59.12	125
26	18.824	305	21.02	101	51.507	338	45.38	38	15.490	358	56.82	328	41.981	284	60.37	151
Dez. 6	19.129	336	22.03	133	51.845	371	45.76	80	15.848	411	53.54	295	42.265	314	61.88	173
16	19.465	355	23.36	162	52.216	393	46.56	121	16.259	452	50.59	254	42.579	335	63.61	191
26	19.820	365	24.98	185	52.609	403	47.77	157	16.711	479	48.05	204	42.914	344	65.52	202
36	20.185		26.83		53.012		49.34		17.190		46.01		43.258		67.54	
Mittl. Ort	16.487		7.23		49.339		34.09		13.905		89.30		39.615		43.82	
sec δ, tg δ	1.085		−0.421		1.242		−0.736		1.755		+1.443		1.018		−0.191	
a, *a'*	+3.3		−19.0		+3.4		−18.9		+2.4		−18.8		+3.2		−18.8	
b, *b'*	+0.03		+ 0.32		+0.05		+ 0.33		−0.09		+ 0.35		+0.01		+ 0.35	

Tag	499) Grb 2001				500) 69 H. Urs. maj.				501) ζ Virginis				502) 17 H. Can. ven.			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	13h 24m		+72° 43′		13h 25m		+60° 16′		13h 31m		−0° 15′		13h 31m		+37° 30′	
Jan. 1	26.29	83	55.88	140	60.32	54	65.86	167	16.700	339	21.22	212	48.715	386	71.70	206
11	27.12	83	54.48	74	60.86	55	64.19	105	17.039	336	23.34	202	49.101	387	69.64	158
21	27.95	82	53.74	7	61.41	53	63.14	40	17.375	322	25.36	185	49.488	375	68.06	106
31	28.77	77	53.67	59	61.94	50	62.74	24	17.697	301	27.21	163	49.863	352	67.00	51
Feb. 10	29.54	70	54.26	122	62.44	46	62.98	86	17.998	274	28.84	137	50.215	320	66.49	4
20	30.24	61	55.48	179	62.90	39	63.84	144	18.272	241	30.21	108	50.535	281	66.53	57
März 2	30.85	49	57.27	226	63.29	32	65.28	193	18.513	206	31.29	79	50.816	237	67.10	104
12	31.34	36	59.53	264	63.61	25	67.21	234	18.719	171	32.08	51	51.053	191	68.14	145
22	31.70	23	62.17	290	63.86	17	69.55	263	18.890	136	32.59	24	51.244	144	69.59	179
Apr. 1	31.93	10	65.07	303	64.03	9	72.18	281	19.026	103	32.83	1	51.388	98	71.38	203
11	$_{13}$32.03	3	68.10	305	$_{13}$64.12	2	74.99	288	$_{15}$19.129	72	32.84	20	$_{15}$51.486	54	73.41	217
20	32.00	16	71.15	296	64.14	5	77.87	283	19.201	44	32.64	36	51.540	13	75.58	224
30	31.84	27	74.11	275	64.09	12	80.70	269	19.245	17	32.28	49	51.553	23	77.82	220
Mai 10	31.57	37	76.86	244	63.97	18	83.39	244	19.262	7	31.79	58	51.530	56	80.02	208
20	31.20	45	79.30	207	63.79	22	85.83	213	19.255	28	31.21	64	51.474	84	82.10	190
30	30.75	52	81.37	163	63.57	26	87.96	173	19.227	47	30.57	67	51.390	110	84.00	166
Juni 9	30.23	57	83.00	115	63.31	29	89.69	130	19.180	65	29.90	67	51.280	129	85.66	136
19	29.66	61	84.15	62	63.02	32	90.99	83	19.115	80	29.23	65	51.151	146	87.02	102
29	29.05	64	84.77	9	62.70	33	91.82	34	19.035	92	28.58	62	51.005	159	88.04	66
Juli 9	28.41	64	84.86	45	62.37	33	92.16	17	18.943	101	27.96	57	50.846	166	88.70	29
19	27.77	63	84.41	98	62.04	33	91.99	67	18.842	107	27.39	50	50.680	169	88.99	10
29	27.14	60	83.43	150	61.71	33	91.32	117	18.735	109	26.89	41	50.511	167	88.89	50
Aug. 8	26.54	56	81.93	198	61.38	31	90.15	164	18.626	105	26.48	30	50.344	159	88.39	89
18	25.98	51	79.95	242	61.07	27	88.51	208	18.521	96	26.18	17	50.185	145	87.50	127
28	25.47	44	77.53	283	60.80	24	86.43	248	18.425	80	26.01	3	50.040	125	86.23	163
Sept. 7	25.03	36	74.70	317	60.56	19	83.95	286	18.345	57	25.98	14	49.915	98	84.60	198
17	24.67	27	71.53	347	60.37	13	81.09	317	18.288	28	26.12	34	49.817	62	82.62	231
27	24.40	16	68.06	368	60.24	7	77.92	342	18.260	7	26.46	56	49.755	22	80.31	259
Okt. 7	24.24	5	64.38	384	60.17	0	74.50	362	18.267	48	27.02	81	49.733	25	77.72	283
17	24.19	7	60.54	390	60.17	7	70.88	374	18.315	93	27.83	104	49.758	76	74.89	304
27	24.26	20	56.64	389	60.24	15	67.14	377	18.408	139	28.87	129	49.834	131	71.85	317
Nov. 6	24.46	33	52.75	377	60.39	24	63.37	372	18.547	185	30.16	154	49.965	185	68.68	325
16	24.79	44	48.98	356	60.63	31	59.65	358	18.732	230	31.70	175	50.150	238	65.43	323
26	25.23	56	45.42	325	60.94	38	56.07	332	18.962	269	33.45	194	50.388	286	62.20	314
Dez. 6	25.79	66	42.17	283	61.32	44	52.75	297	19.231	300	35.39	207	50.674	327	59.06	295
16	26.45	74	39.34	234	61.76	50	49.78	254	19.531	323	37.46	214	51.001	357	56.11	267
26	27.19	80	37.00	177	62.26	53	47.24	201	19.854	335	39.60	214	51.358	378	53.44	230
36	27.99		35.23		62.79		45.23		20.189		41.74		51.736		51.14	
Mittl. Ort	25.41		80.58		59.74		89.15		16.644		14.47		48.408		90.34	
sec δ, tg δ	3.370		+3.218		2.018		+1.753		1.000		−0.005		1.261		+0.768	
a, a′	+1.5		−18.7		+2.2		−18.6		+3.1		−18.5		+2.7		−18.5	
b, b′	−0.20		+ 0.36		−0.11		+ 0.37		0.00		+ 0.39		−0.05		+ 0.39	

Scheinbare Sternörter 1933

Tag	504) ε Centauri				507) τ Bootis				509) η Ursae maj.				510) 89 Virginis			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	13h 35m		−53° 7′		13h 44m		+17° 46′		13h 44m		+49° 38′		13h 46m		−17° 48′	
Jan. 1	36.944	509	26.30	124	4.787	343	70.68	220	54.457	436	27.78	205	13.448	355	5.12	187
11	37.453	502	27.54	167	5.130	343	68.48	192	54.893	443	25.73	148	13.803	353	6.99	197
21	37.955	483	29.21	206	5.473	333	66.56	156	55.336	435	24.25	88	14.156	340	8.96	199
31	38.438	451	31.27	237	5.806	314	65.00	116	55.771	414	23.37	27	14.496	321	10.95	197
Feb. 10	38.889	412	33.64	262	6.120	288	63.84	75	56.185	381	23.10	34	14.817	294	12.92	188
20	39.301	366	36.26	281	6.408	256	63.09	32	56.566	337	23.44	93	15.111	263	14.80	175
März 2	39.667	316	39.07	291	6.664	221	62.77	9	56.903	287	24.37	144	15.374	230	16.55	159
12	39.983	264	41.98	296	6.885	184	62.86	46	57.190	232	25.81	189	15.604	195	18.14	142
22	40.247	212	44.94	295	7.069	146	63.32	79	57.422	175	27.70	224	15.799	161	19.56	122
Apr. 1	40.459	160	47.89	289	7.215	111	64.11	105	57.597	117	29.94	249	15.960	127	20.78	103
11	40.619	110	50.78	276	7.326	77	65.16	125	57.714	61	32.43	263	16.087	96	21.81	84
20	40.729	61	53.54	260	7.403	45	66.41	138	57.775	9	35.06	267	16.183	66	22.65	66
30	40.790	14	56.14	239	7.448	15	67.79	145	57.784	40	37.73	261	16.249	38	23.31	49
Mai 10	40.804	31	58.53	213	7.463	11	69.24	146	57.744	84	40.34	245	16.287	12	23.80	33
20	40.773	72	60.66	183	7.452	36	70.70	140	57.660	123	42.79	221	16.299	13	24.13	17
30	40.701	112	62.49	151	7.416	57	72.10	130	57.537	156	45.00	190	16.286	36	24.30	3
Juni 9	40.589	148	64.00	115	7.359	77	73.40	116	57.381	184	46.90	154	16.250	57	24.33	11
19	40.441	178	65.15	76	7.282	93	74.56	99	57.197	207	48.44	114	16.193	77	24.22	24
29	40.263	204	65.91	36	7.189	107	75.55	78	56.990	224	49.58	70	16.116	93	23.98	35
Juli 9	40.059	222	66.27	5	7.082	117	76.33	56	56.766	234	50.28	25	16.023	106	23.63	47
19	39.837	233	66.22	46	6.965	125	76.89	32	56.532	239	50.53	22	15.917	116	23.16	57
29	39.604	235	65.76	86	6.840	126	77.21	7	56.293	238	50.31	68	15.801	120	22.59	65
Aug. 8	39.369	226	64.90	123	6.714	124	77.28	19	56.055	228	49.63	113	15.681	118	21.94	70
18	39.143	207	63.67	156	6.590	116	77.09	47	55.827	212	48.50	157	15.563	111	21.24	74
28	38.936	174	62.11	184	6.474	100	76.62	74	55.615	188	46.93	199	15.452	95	20.50	73
Sept. 7	38.762	132	60.27	203	6.374	79	75.88	102	55.427	156	44.94	237	15.357	73	19.77	69
17	38.630	78	58.24	217	6.295	50	74.86	129	55.271	115	42.57	271	15.284	42	19.08	60
27	38.552	16	56.07	221	6.245	16	73.57	157	55.156	68	39.86	302	15.242	5	18.48	47
Okt. 7	38.536	56	53.86	215	6.229	26	72.00	183	55.088	12	36.84	326	15.237	39	18.01	28
17	38.592	131	51.71	199	6.255	70	70.17	207	55.076	47	33.58	346	15.276	86	17.73	6
27	38.723	207	49.72	175	6.325	119	68.10	228	55.123	112	30.12	356	15.362	137	17.67	20
Nov. 6	38.930	282	47.97	141	6.444	167	65.82	245	55.235	177	26.56	360	15.499	187	17.87	49
16	39.212	350	46.56	101	6.611	213	63.37	258	55.412	240	22.96	353	15.686	234	18.36	78
26	39.562	409	45.55	55	6.824	256	60.79	263	55.652	300	19.43	339	15.920	275	19.14	107
Dez. 6	39.971	455	45.00	7	7.080	291	58.16	261	55.952	352	16.04	312	16.195	311	20.21	135
16	40.426	489	44.93	44	7.371	319	55.55	252	56.304	393	12.92	278	16.506	335	21.56	158
26	40.915	505	45.37	93	7.690	335	53.03	234	56.697	422	10.14	234	16.841	350	23.14	177
36	41.420		46.30		8.025		50.69		57.119		7.80		17.191		24.91	
Mittl. Ort	37.707		35.76		4.689		83.80		54.201		49.38		13.628		3.91	
sec δ, tg δ	1.667		−1.333		1.050		+0.321		1.544		+1.177		1.050		−0.321	
a, *a′*	+3.8		−18.3		+2.9		−18.0		+2.4		−18.0		+3.3		−17.9	
b, *b′*	+0.08		+0.41		−0.02		+0.44		−0.07		+0.44		+0.02		+0.45	

Tag	512) ζ Centauri AR.	Diff.	512) ζ Centauri Dekl.	Diff.	513) η Bootis AR.	Diff.	513) η Bootis Dekl.	Diff.
1933	13h 51m		−46° 57′		13h 51m		+18° 43′	
Jan. 1	20.193	460	26.92	120	29.732	343	44.75	225
11	20.653	458	28.12	158	30.075	344	42.50	194
21	21.111	444	29.70	192	30.419	336	40.56	158
31	21.555	419	31.62	219	30.755	318	38.98	118
Feb. 10	21.974	387	33.81	239	31.073	293	37.80	75
20	22.361	348	36.20	255	31.366	263	37.05	32
März 2	22.709	306	38.75	262	31.629	228	36.73	11
12	23.015	262	41.37	266	31.857	192	36.84	49
22	23.277	216	44.03	263	32.049	155	37.33	82
Apr. 1	23.493	171	46.66	256	32.204	119	38.15	109
11	23.664	128	49.22	244	32.323	85	39.24	130
20*)	23.792	85	51.66	230	32.408	52	40.54	144
30	23.877	44	53.96	211	32.460	22	41.98	151
Mai 10	23.921	4	56.07	188	32.482	5	43.49	151
20	23.925	35	57.95	162	32.477	31	45.00	146
30	23.890	70	59.57	134	32.446	53	46.46	136
Juni 9	23.820	104	60.91	103	32.393	73	47.82	121
19	23.716	133	61.94	70	32.320	92	49.03	103
29	23.583	160	62.64	34	32.228	107	50.06	82
Juli 9	23.423	180	62.98	2	32.121	118	50.88	58
19	23.243	193	62.96	37	32.003	126	51.46	34
29	23.050	200	62.59	72	31.877	130	51.80	7
Aug. 8	22.850	196	61.87	105	31.747	128	51.87	20
18	22.654	183	60.82	134	31.619	120	51.67	48
28	22.471	161	59.48	159	31.499	107	51.19	76
Sept. 7	22.310	125	57.89	178	31.392	85	50.43	105
17	22.185	81	56.11	188	31.307	58	49.38	133
27	22.104	28	54.23	193	31.249	23	48.05	160
Okt. 7	22.076	34	52.30	186	31.226	17	46.45	187
17	22.110	100	50.44	173	31.243	63	44.58	212
27	22.210	169	48.71	151	31.306	111	42.46	233
Nov. 6	22.379	237	47.20	120	31.417	160	40.13	251
16	22.616	300	46.00	82	31.577	207	37.62	262
26	22.916	356	45.18	42	31.784	250	35.00	268
Dez. 6	23.272	401	44.76	3	32.034	288	32.32	266
16	23.673	435	44.79	48	32.322	316	29.66	256
26	24.108	454	45.27	92	32.638	334	27.10	239
36	24.562		46.19		32.972		24.71	
Mittl. Ort	20.879		34.17		29.677		58.30	
sec δ, tg δ	1.465		−1.071		1.056		+0.339	
a, a′	+3.7		−17.7		+2.9		−17.7	
b, b′	+0.06		+ 0.47		−0.02		+ 0.47	

Tag	517) 11 Bootis AR.	Diff.	517) 11 Bootis Dekl.	Diff.	516) τ Virginis AR.	Diff.	516) τ Virginis Dekl.	Diff.
1933	13h 58m		+27° 41′		13h 58m		+1° 51′	
Jan. 1	8.313	353	77.63	228	14.025	336	56.32	211
11	8.666	358	75.35	190	14.361	336	54.21	201
21	9.024	350	73.45	145	14.697	328	52.20	181
31	9.374	335	72.00	97	15.025	312	50.39	157
Feb. 10	9.709	309	71.03	47	15.337	288	48.82	129
20	10.018	279	70.56	3	15.625	260	47.53	99
März 2	10.297	243	70.59	49	15.885	228	46.54	68
12	10.540	204	71.08	92	16.113	195	45.86	37
22	10.744	165	72.00	128	16.308	162	45.49	9
Apr. 1	10.909	126	73.28	156	16.470	130	45.40	15
11	11.035	88	74.84	178	16.600	98	45.55	37
20*)	11.123	52	76.62	190	16.698	69	45.92	53
30	11.175	19	78.52	194	16.767	41	46.45	66
Mai 10	11.194	12	80.46	191	16.808	16	47.11	75
20	11.182	40	82.37	181	16.824	9	47.86	79
30	11.142	66	84.18	165	16.815	31	48.65	80
Juni 9	11.076	88	85.83	145	16.784	52	49.45	78
19	10.988	108	87.28	119	16.732	71	50.23	75
29	10.880	124	88.47	91	16.661	87	50.98	68
Juli 9	10.756	137	89.38	60	16.574	100	51.66	60
19	10.619	146	89.98	28	16.474	111	52.26	51
29	10.473	149	90.26	6	16.363	116	52.77	39
Aug. 8	10.324	148	90.20	40	16.247	117	53.16	27
18	10.176	141	89.80	74	16.130	111	53.43	12
28	10.035	126	89.06	108	16.019	98	53.55	5
Sept. 7	9.909	104	87.98	141	15.921	80	53.50	22
17	9.805	76	86.57	173	15.841	52	53.28	43
27	9.729	40	84.84	203	15.789	19	52.85	65
Okt. 7	9.689	2	82.81	231	15.770	20	52.20	88
17	9.691	49	80.50	255	15.790	65	51.32	113
27	9.740	99	77.95	275	15.855	112	50.19	137
Nov. 6	9.839	152	75.20	290	15.967	161	48.82	160
16	9.991	202	72.30	297	16.128	206	47.22	181
26	10.193	248	69.33	297	16.334	248	45.41	198
Dez. 6	10.441	288	66.36	289	16.582	283	43.43	210
16	10.729	321	63.47	272	16.865	311	41.33	215
26	11.050	343	60.75	247	17.176	328	39.18	214
36	11.393		58.28		17.504		37.04	
Mittl. Ort	8.262		93.95		14.108		64.52	
sec δ, tg δ	1.130		+0.525		1.001		+0.033	
a, a′	+2.7		−17.4		+3.1		−17.4	
b, b′	−0.03		+ 0.49		0.00		+ 0.49	

*) Bei Stern 517) und 516) lies April 21

Scheinbare Sternörter 1933

Tag	518) β Centauri AR.	Δ	518) β Centauri Dekl.	Δ	521) α Draconis AR.	Δ	521) α Draconis Dekl.	Δ	520) ϑ Centauri AR.	Δ	520) ϑ Centauri Dekl.	Δ	522) *d* Bootis AR.	Δ	522) *d* Bootis Dekl.	Δ
1933	$13^h\,59^m$		−60° 2′		$14^h\,2^m$		+64° 41′		$14^h\,2^m$		−36° 2′		$14^h\,7^m$		+25° 23′	
	s		″		s		″		s		″		s		″	
Jan. 1	3.41	59	53.54	75	34.50	57	20.29	202	43.345	401	24.89	137	20.626	346	73.96	232
11	4.00	59	54.29	124	35.07	60	18.27	140	43.746	402	26.26	165	20.972	351	71.64	197
21	4.59	58	55.53	168	35.67	60	16.87	75	44.148	391	27.91	188	21.323	347	69.67	154
31	5.17	55	57.21	206	36.27	59	16.12	7	44.539	372	29.79	205	21.670	333	68.13	108
Feb. 10	5.72	51	59.27	240	36.86	54	16.05	58	44.911	346	31.84	216	22.003	310	67.05	60
20	6.23	46	61.67	266	37.40	49	16.63	121	45.257	313	34.00	222	22.313	280	66.45	10
März 2	6.69	41	64.33	285	37.89	43	17.84	176	45.570	278	36.22	222	22.593	247	66.35	35
12	7.10	36	67.18	299	38.32	34	19.60	223	45.848	240	38.44	218	22.840	211	66.70	78
22	7.46	29	70.17	304	38.66	26	21.83	261	46.088	203	40.62	211	23.051	173	67.48	116
Apr. 1	7.75	23	73.21	306	38.92	17	24.44	286	46.291	165	42.73	200	23.224	135	68.64	144
11	7.98	17	76.27	299	39.09	9	27.30	300	46.456	129	44.73	187	23.359	98	70.08	167
21	[22] 8.15	11	79.26	289	[23] 39.18	0	30.30	302	[23] 46.585	93	46.60	171	[24] 23.457	64	71.75	181
30	8.26	5	82.15	272	39.18	9	33.32	294	46.678	59	48.31	154	23.521	31	73.56	188
Mai 10	8.31	1	84.87	251	39.09	16	36.26	274	46.737	26	49.85	135	23.552	0	75.44	186
20	8.30	6	87.38	224	38.93	23	39.00	247	46.763	7	51.20	113	23.552	28	77.30	178
30	8.24	12	89.62	193	38.70	28	41.47	212	46.756	38	52.33	91	23.524	55	79.08	165
Juni 9	8.12	16	91.55	158	38.42	33	43.59	170	46.718	66	53.24	67	23.469	78	80.73	146
19	7.96	21	93.13	119	38.09	37	45.29	124	46.652	93	53.91	41	23.391	98	82.19	122
29	7.75	25	94.32	76	37.72	40	46.53	74	46.559	117	54.32	15	23.293	117	83.41	97
Juli 9	7.50	28	95.08	33	37.32	42	47.27	24	46.442	135	54.47	12	23.176	131	84.38	67
19	7.22	30	95.41	12	36.90	43	47.51	29	46.307	151	54.35	38	23.045	141	85.05	37
29	6.92	30	95.29	57	36.47	43	47.22	81	46.156	158	53.97	63	22.904	147	85.42	5
Aug. 8	6.62	30	94.72	100	36.04	42	46.41	132	45.998	159	53.34	86	22.757	147	85.47	28
18	6.32	28	93.72	139	35.62	39	45.09	179	45.839	151	52.48	108	22.610	142	85.19	61
28	6.04	25	92.33	176	35.23	36	43.30	225	45.688	135	51.40	123	22.468	129	84.58	94
Sept. 7	5.79	21	90.57	204	34.87	31	41.05	266	45.553	109	50.17	135	22.339	108	83.64	126
17	5.58	14	88.53	225	34.56	25	38.39	302	45.444	74	48.82	140	22.231	82	82.38	158
27	5.44	7	86.28	239	34.31	18	35.37	333	45.370	30	47.42	140	22.149	47	80.80	189
Okt. 7	5.37	1	83.89	241	34.13	11	32.04	358	45.340	21	46.02	130	22.102	6	78.91	217
17	5.38	10	81.48	233	34.02	3	28.46	376	45.361	78	44.72	115	22.096	40	76.74	242
27	5.48	20	79.15	216	33.99	7	24.70	385	45.439	137	43.57	93	22.136	90	74.32	263
Nov. 6	5.68	28	76.99	188	34.06	17	20.85	385	45.576	195	42.64	64	22.226	142	71.69	279
16	5.96	37	75.11	152	34.23	26	17.00	375	45.771	251	42.00	31	22.368	192	68.90	289
26	6.33	44	73.59	109	34.49	34	13.25	355	46.022	302	41.69	5	22.560	238	66.01	292
Dez. 6	6.77	51	72.50	61	34.83	43	9.70	325	46.324	343	41.74	43	22.798	280	63.09	286
16	7.28	56	71.89	10	35.26	50	6.45	284	46.667	374	42.17	79	23.078	311	60.23	272
26	7.84	58	71.79	41	35.76	55	3.61	234	47.041	394	42.96	115	23.389	335	57.51	248
36	8.42		72.20		36.31		1.27		47.435		44.11		23.724		55.03	
Mittl. Ort	4.66		63.29		34.45		44.35		43.859		28.70		20.648		89.73	
sec δ, tg δ	2.003		−1.736		2.339		+2.115		1.237		−0.728		1.107		+0.475	
a, *a*′	+4.2		−17.4		+1.6		−17.2		+3.6		−17.2		+2.7		−17.0	
b, *b*′	+0.10		+ 0.50		−0.12		+ 0.51		+0.04		+ 0.51		−0.03		+ 0.53	

Tag	524) 4 Ursae min.				523) κ Virginis				525) ι Virginis				526) α Bootis			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	14h 9m		+77° 51′		14h 9m		−9° 57′		14h 12m		−5° 40′		14h 12m		+19° 31′	
Jan. 1	4.32	103	19.44	185	18.880	341	50.35	190	29.663	336	60.07	198	36.205	335	35.54	237
11	5.35	109	17.59	122	19.221	343	52.25	191	29.999	338	62.05	196	36.540	341	33.17	206
21	6.44	112	16.37	55	19.564	336	54.16	186	30.337	333	64.01	185	36.881	336	31.11	170
31	7.56	109	15.82	13	19.900	321	56.02	175	30.670	318	65.86	169	37.217	323	29.41	129
Feb. 10	8.65	103	15.95	80	20.221	298	57.77	158	30.988	297	67.55	149	37.540	301	28.12	85
20	9.68	93	16.75	141	20.519	271	59.35	140	31.285	271	69.04	126	37.841	275	27.27	40
März 2	10.61	81	18.16	196	20.790	242	60.75	118	31.556	241	70.30	100	38.116	243	26.87	4
12	11.42	65	20.12	242	21.032	210	61.93	95	31.797	210	71.30	75	38.359	208	26.91	44
22	12.07	48	22.54	278	21.242	178	62.88	72	32.007	178	72.05	50	38.567	173	27.35	81
Apr. 1	12.55	29	25.32	301	21.420	146	63.60	51	32.185	147	72.55	27	38.740	138	28.16	109
11	12.84	11	28.33	311	21.566	115	64.11	32	32.332	116	72.82	7	38.878	103	29.25	133
21	12.95	7	31.44	312	21.681	86	64.43	14	32.448	87	72.89	11	38.981	71	30.58	147
30	12.88	25	34.56	299	21.767	59	64.57	0	32.535	59	72.78	24	39.052	40	32.05	157
Mai 10	12.63	42	37.55	278	21.826	31	64.57	13	32.594	32	72.54	36	39.092	10	33.62	159
20	12.21	56	40.33	246	21.857	6	64.44	24	32.626	7	72.18	44	39.102	17	35.21	154
30	11.65	69	42.79	208	21.863	19	64.20	32	32.633	18	71.74	50	39.085	42	36.75	145
Juni 9	10.96	79	44.87	163	21.844	41	63.88	39	32.615	40	71.24	54	39.043	66	38.20	130
19	10.17	88	46.50	115	21.803	63	63.49	44	32.575	62	70.70	55	38.977	87	39.50	112
29	9.29	94	47.65	62	21.740	82	63.05	48	32.513	81	70.15	56	38.890	105	40.62	90
Juli 9	8.35	97	48.27	8	21.658	98	62.57	51	32.432	97	69.59	54	38.785	121	41.52	66
19	7.38	99	48.35	46	21.560	111	62.06	52	32.335	110	69.05	52	38.664	132	42.18	40
29	6.39	99	47.89	99	21.449	119	61.54	53	32.225	118	68.53	47	38.532	139	42.58	13
Aug. 8	5.40	95	46.90	150	21.330	121	61.01	51	32.107	120	68.06	41	38.393	141	42.71	16
18	4.45	90	45.40	199	21.209	117	60.50	47	31.987	118	67.65	34	38.252	136	42.55	45
28	3.55	83	43.41	243	21.092	106	60.03	41	31.869	107	67.31	24	38.116	125	42.10	74
Sept. 7	2.72	73	40.98	284	20.986	87	59.62	31	31.762	89	67.07	11	37.991	107	41.36	104
17	1.99	62	38.14	319	20.899	60	59.31	19	31.673	63	66.96	4	37.884	80	40.32	134
27	1.37	49	34.95	348	20.839	27	59.12	3	31.610	30	67.00	22	37.804	48	38.98	162
Okt. 7	0.88	33	31.47	370	20.812	14	59.09	16	31.580	9	67.22	43	37.756	8	37.36	190
17	0.55	17	27.77	384	20.826	60	59.25	38	31.589	55	67.65	65	37.748	37	35.46	216
27	0.38	1	23.93	390	20.886	108	59.63	62	31.644	102	68.30	89	37.785	86	33.30	239
Nov. 6	0.39	19	20.03	386	20.994	158	60.25	88	31.746	151	69.19	114	37.871	135	30.91	257
16	0.58	37	16.17	374	21.152	205	61.13	112	31.897	199	70.33	138	38.006	185	28.34	269
26	0.95	55	12.43	350	21.357	249	62.25	136	32.096	242	71.71	158	38.191	230	25.65	277
Dez. 6	1.50	71	8.93	316	21.606	285	63.61	158	32.338	279	73.29	177	38.421	270	22.88	276
16	2.21	85	5.77	272	21.891	315	65.19	173	32.617	308	75.06	188	38.691	302	20.12	266
26	3.06	98	3.05	220	22.206	332	66.92	184	32.925	328	76.94	196	38.993	323	17.46	249
36	4.04		0.85		22.538		68.76		33.253		78.90		39.316		14.97	
Mittl. Ort	4.71		44.54		19.109		45.78		29.875		54.00		36.283		49.64	
sec δ, tg δ	4.755		+4.649		1.015		−0.176		1.005		−0.100		1.061		+0.355	
a, *a′*	−0.2		−16.9		+3.2		−16.9		+3.1		−16.8		+2.8		−16.8	
b, *b′*	−0.26		+ 0.53		+0.01		+ 0.53		+0.01		+ 0.55		−0.02		+ 0.55	

Tag	527) λ Bootis AR.		527) λ Bootis Dekl.		531) θ Bootis AR.		531) θ Bootis Dekl.		534) ρ Bootis AR.		534) ρ Bootis Dekl.		535) γ Bootis AR.		535) γ Bootis Dekl.	
1933	14h 13m		+46° 23′		14h 22m		+52° 8′		14h 28m		+30° 39′		14h 29m		+38° 35′	
Jan. 1	50.238	402	21.82	234	54.829	428	73.06	239	56.407	345	35.52	245	22.679	364	42.56	247
11	50.640	416	19.48	181	55.257	447	70.67	184	56.752	357	33.07	205	23.043	377	40.09	202
21	51.056	415	17.67	124	55.704	452	68.83	125	57.109	357	31.02	160	23.420	380	38.07	150
31	51.471	403	16.43	63	56.156	441	67.58	61	57.466	347	29.42	109	23.800	370	36.57	94
Feb. 10	51.874	378	15.80	2	56.597	417	66.97	3	57.813	328	28.33	57	24.170	351	35.63	37
20	52.252	344	15.78	58	57.014	383	67.00	66	58.141	302	27.76	3	24.521	324	35.26	22
März 2	52.596	302	16.36	114	57.397	338	67.66	123	58.443	271	27.73	48	24.845	289	35.48	76
12	52.898	255	17.50	162	57.735	287	68.89	174	58.714	235	28.21	94	25.134	249	36.24	126
22	53.153	205	19.12	203	58.022	232	70.63	217	58.949	197	29.15	135	25.383	208	37.50	167
Apr. 1	53.358	153	21.15	234	58.254	174	72.80	249	59.146	159	30.50	169	25.591	164	39.17	203
11	53.511	102	23.49	255	58.428	116	75.29	271	59.305	120	32.19	193	25.755	121	41.20	226
21	(25) 53.613	52	26.04	266	(28) 58.544	58	78.00	282	(29) 59.425	83	34.12	209	(29) 25.876	79	43.46	241
30	53.665	5	28.70	265	58.602	3	80.82	281	59.508	47	36.21	218	25.955	37	45.87	248
Mai 10	53.670	38	31.35	257	58.605	48	83.63	272	59.555	13	38.39	216	25.992	1	48.35	244
20	53.632	79	33.92	239	58.557	95	86.35	253	59.568	20	40.55	208	25.991	37	50.79	232
30	53.553	116	36.31	213	58.462	139	88.88	227	59.548	50	42.63	193	25.954	71	53.11	212
Juni 9	53.437	147	38.44	182	58.323	176	91.15	193	59.498	78	44.56	172	25.883	102	55.23	187
19	53.290	174	40.26	146	58.147	209	93.08	154	59.420	102	46.28	147	25.781	130	57.10	156
29	53.116	197	41.72	105	57.938	236	94.62	111	59.318	125	47.75	117	25.651	152	58.66	122
Juli 9	52.919	215	42.77	62	57.702	257	95.73	65	59.193	143	48.92	84	25.499	172	59.88	83
19	52.704	226	43.39	17	57.445	270	96.38	18	59.050	157	49.76	50	25.327	186	60.71	43
29	52.478	231	43.56	28	57.175	278	96.56	30	58.893	167	50.26	13	25.141	196	61.14	2
Aug. 8	52.247	229	43.28	74	56.897	277	96.26	78	58.726	170	50.39	24	24.945	198	61.16	40
18	52.018	221	42.54	118	56.620	267	95.48	126	58.556	167	50.15	61	24.747	194	60.76	82
28	51.797	203	41.36	162	56.353	249	94.22	171	58.389	156	49.54	98	24.553	182	59.94	123
Sept. 7	51.594	177	39.74	202	56.104	221	92.51	214	58.233	139	48.56	134	24.371	162	58.71	163
17	51.417	144	37.72	240	55.883	185	90.37	253	58.094	112	47.22	169	24.209	134	57.08	200
27	51.273	101	35.32	274	55.698	139	87.84	289	57.982	79	45.53	203	24.075	97	55.08	235
Okt. 7	51.172	51	32.58	304	55.559	84	84.95	318	57.903	38	43.50	233	23.978	54	52.73	267
17	51.121	6	29.54	326	55.475	23	81.77	343	57.865	9	41.17	260	23.924	3	50.06	293
27	51.127	66	26.28	345	55.452	44	78.34	360	57.874	61	38.57	283	23.921	53	47.13	315
Nov. 6	51.193	130	22.83	353	55.496	115	74.74	369	57.935	114	35.74	299	23.974	110	43.98	329
16	51.323	193	19.30	354	55.611	185	71.05	368	58.049	168	32.75	309	24.084	168	40.69	336
26	51.516	253	15.76	346	55.796	252	67.37	359	58.217	219	29.66	310	24.252	223	37.33	333
Dez. 6	51.769	306	12.30	327	56.048	313	63.78	338	58.436	264	26.56	304	24.475	273	34.00	322
16	52.075	352	9.03	298	56.361	366	60.40	307	58.700	302	23.52	288	24.748	314	30.78	300
26	52.427	385	6.05	259	56.727	406	57.33	267	59.002	331	20.64	263	25.062	348	27.78	269
36	52.812		3.46		57.133		54.66		59.333		18.01		25.410		25.09	
Mittl. Ort	50.285		42.84		54.991		95.13		56.573		52.84		22.854		61.83	
sec δ, tg δ	1.450		+1.050		1.630		+1.287		1.163		+0.593		1.280		+0.798	
a, *a′*	+2.3		−16.7		+2.1		−16.3		+2.6		−16.0		+2.4		−15.9	
b, *b′*	−0.06		+ 0.55		−0.07		+ 0.58		−0.03		+ 0.61		−0.04		+ 0.61	

Tag	537) η Centauri AR.		537) η Centauri Dekl.		538) α Centauri[1]) AR.		538) α Centauri[1]) Dekl.		543) ζ Bootis med. AR.		543) ζ Bootis med. Dekl.		542) α Apodis AR.		542) α Apodis Dekl.	
1933	14h 31m		−41° 51′		14h 35m		−60° 33′		14h 37m		+14° 0′		14h 39m		−78° 45′	
Jan. 1	13.809	422	48.60	89	0.82	59	28.37	33	56.657	323	40.17	231	21.85	131	35.67	37
11	14.231	430	49.49	123	1.41	59	28.70	81	56.980	333	37.86	207	23.16	137	35.30	19
21	14.661	426	50.72	151	2.00	59	29.51	125	57.313	333	35.79	176	24.53	138	35.49	75
31	15.087	413	52.23	175	2.59	57	30.76	166	57.646	324	34.03	141	25.91	135	36.24	128
Feb. 10	15.500	390	53.98	194	3.16	54	32.42	201	57.970	308	32.62	102	27.26	130	37.52	176
20	15.890	361	55.92	207	3.70	50	34.43	230	58.278	285	31.60	60	28.56	122	39.28	219
März 2	16.251	328	57.99	215	4.20	45	36.73	252	58.563	258	31.00	20	29.78	111	41.47	256
12	16.579	292	60.14	218	4.65	40	39.25	270	58.821	228	30.80	20	30.89	99	44.03	287
22	16.871	254	62.32	217	5.05	34	41.95	281	59.049	196	31.00	56	31.88	86	46.90	310
Apr. 1	17.125	216	64.49	214	5.39	28	44.76	285	59.245	164	31.56	86	32.74	71	50.00	328
11	17.341	177	66.63	205	5.67	22	47.61	286	59.409	132	32.42	112	33.45	56	53.28	338
21	17.518	138	68.68	195	5.89	15	50.47	280	59.541	102	33.54	129	34.01	39	56.66	341
30*)	17.656	100	70.63	182	6.04	10	53.27	268	59.643	71	34.83	142	34.40	22	60.07	337
Mai 10	17.756	61	72.45	166	6.14	4	55.95	252	59.714	41	36.25	147	34.62	6	63.44	326
20	17.817	23	74.11	147	6.18	3	58.47	232	59.755	13	37.72	148	34.68	11	66.70	308
30	17.840	14	75.58	126	6.15	9	60.79	205	59.768	15	39.20	142	34.57	27	69.78	283
Juni 9	17.826	50	76.84	102	6.06	14	62.84	174	59.753	40	40.62	132	34.30	43	72.61	251
19	17.776	84	77.86	76	5.92	19	64.58	140	59.713	64	41.94	118	33.87	57	75.12	213
29	17.692	116	78.62	49	5.73	24	65.98	102	59.649	86	43.12	102	33.30	70	77.25	170
Juli 9	17.576	143	79.11	20	5.49	28	67.00	60	59.563	106	44.14	82	32.60	79	78.95	123
19	17.433	164	79.31	10	5.21	31	67.60	18	59.457	122	44.96	61	31.81	87	80.18	70
29	17.269	178	79.21	40	4.90	32	67.78	26	59.335	132	45.57	38	30.94	92	80.88	17
Aug. 8	17.091	186	78.81	69	4.58	33	67.52	70	59.203	139	45.95	13	30.02	93	81.05	38
18	16.905	183	78.12	96	4.25	32	66.82	111	59.064	139	46.08	13	29.09	91	80.67	92
28	16.722	170	77.16	119	3.93	30	65.71	150	58.925	131	45.95	38	28.18	84	79.75	143
Sept. 7	16.552	146	75.97	139	3.63	26	64.21	182	58.794	117	45.57	65	27.34	75	78.32	189
17	16.406	111	74.58	151	3.37	20	62.39	209	58.677	94	44.92	93	26.59	61	76.43	229
27	16.295	68	73.07	159	3.17	13	60.30	227	58.583	64	43.99	120	25.98	44	74.14	261
Okt. 7	16.227	14	71.48	158	3.04	6	58.03	239	58.519	27	42.79	148	25.54	24	71.53	283
17	16.213	46	69.90	150	2.98	4	55.64	234	58.492	17	41.31	174	25.30	3	68.70	293
27	16.259	109	68.40	134	3.02	13	53.30	226	58.509	64	39.57	198	25.27	19	65.77	292
Nov. 6	16.368	175	67.06	111	3.15	23	51.04	205	58.573	114	37.59	219	25.46	42	62.85	280
16	16.543	238	65.95	83	3.38	32	48.99	176	58.687	163	35.40	236	25.88	64	60.05	255
26	16.781	295	65.12	48	3.70	40	47.23	140	58.850	209	33.04	247	26.52	84	57.50	221
Dez. 6	17.076	344	64.64	11	4.10	47	45.83	96	59.059	251	30.57	252	27.36	102	55.29	178
16	17.420	384	64.53	27	4.57	53	44.87	48	59.310	286	28.05	249	28.38	116	53.51	129
26	17.804	411	64.80	65	5.10	56	44.39	0	59.596	310	25.56	239	29.54	128	52.22	74
36	18.215		65.45		5.66		44.39		59.906		23.17		30.82		51.48	
Mittl. Ort	14.596		52.64		2.29		36.35		56.906		52.91		26.56		45.64	
sec δ, tg δ	1.343		−0.896		2.035		−1.772		1.031		+0.250		5.132		−5.034	
a, a'	+3.8		−15.8		+4.6		−15.6		+2.9		−15.5		+7.4		−15.4	
b, b'	+0.05		+ 0.61		+0.09		+ 0.63		−0.01		+ 0.64		+0.26		+ 0.64	

*) Bei Stern 538), 543) und 542) lies Mai 1

[1]) Ort des hellen Sterns; die jährliche Parallaxe (0.″75) ist bereits berücksichtigt.

Scheinbare Sternörter 1933

Tag	545) μ Virginis AR.		545) μ Virginis Dekl.		547) 109 Virginis AR.		547) 109 Virginis Dekl.		548) α Librae AR.		548) α Librae Dekl.		549) Grb 2164 AR.		549) Grb 2164 Dekl.	
1933	$14^h\ 39^m$		$-5°\ 22'$		$14^h\ 42^m$		$+2°\ 10'$		$14^h\ 47^m$		$-15°\ 45'$		$14^h\ 49^m$		$+59°\ 33'$	
Jan. 1	$31^s.236$	327	$11''.67$	191	$51^s.263$	321	$17''.45$	207	$9^s.591$	336	$56''.05$	158	$43^s.614$	461	$33''.38$	256
11	31.563	335	13.58	187	51.584	331	15.38	196	9.927	345	57.63	165	44.075	498	30.82	202
21	31.898	334	15.45	178	51.915	330	13.42	179	10.272	346	59.28	167	44.573	513	28.80	141
31	32.232	325	17.23	162	52.245	321	11.63	154	10.618	337	60.95	164	45.086	514	27.39	74
Feb. 10	32.557	307	18.85	142	52.566	305	10.09	127	10.955	320	62.59	154	45.600	497	26.65	8
20	32.864	286	20.27	119	52.871	284	8.82	96	11.275	299	64.13	142	46.097	467	26.57	58
März 2	33.150	260	21.46	93	53.155	259	7.86	64	11.574	274	65.55	127	46.564	422	27.15	120
12	33.410	231	22.39	68	53.414	230	7.22	33	11.848	246	66.82	109	46.986	367	28.35	176
22	33.641	202	23.07	42	53.644	201	6.89	3	12.094	217	67.91	90	47.353	305	30.11	223
Apr. 1	33.843	172	23.49	19	53.845	171	6.86	24	12.311	188	68.81	73	47.658	238	32.34	260
11	34.015	143	23.68	1	54.016	141	7.10	46	12.499	158	69.54	56	47.896	167	34.94	287
21	34.158	114	23.67	19	54.157	112	7.56	65	12.657	129	70.10	41	48.063	96	37.81	301
Mai 1	34.272	85	23.48	33	54.269	83	8.21	78	12.786	99	70.51	27	48.159	26	40.82	305
10	34.357	57	23.15	43	54.352	55	8.99	87	12.885	70	70.78	14	48.185	40	43.87	298
20	34.414	30	22.72	52	54.407	28	9.86	92	12.955	41	70.92	4	48.145	104	46.85	281
30	34.444	3	22.20	56	54.435	1	10.78	93	12.996	13	70.96	5	48.041	163	49.66	256
Juni 9	34.447	22	21.64	58	54.436	25	11.71	91	13.009	16	70.91	14	47.878	215	52.22	224
19	34.425	48	21.06	60	54.411	50	12.62	86	12.993	43	70.77	22	47.663	261	54.46	184
29	34.377	71	20.46	58	54.361	73	13.48	79	12.950	68	70.55	29	47.402	300	56.30	141
Juli 9	34.306	90	19.88	55	54.288	93	14.27	69	12.882	91	70.26	35	47.102	332	57.71	93
19	34.216	108	19.33	52	54.195	111	14.96	58	12.791	110	69.91	41	46.770	355	58.64	44
29	34.108	121	18.81	47	54.084	123	15.54	46	12.681	125	69.50	46	46.415	369	59.08	7
Aug. 8	33.987	128	18.34	41	53.961	130	16.00	33	12.556	133	69.04	49	46.046	374	59.01	58
18	33.859	128	17.93	32	53.831	131	16.33	17	12.423	136	68.55	51	45.672	368	58.43	109
28	33.731	122	17.61	22	53.700	125	16.50	0	12.287	128	68.04	51	45.304	352	57.34	157
Sept. 7	33.609	107	17.39	10	53.575	112	16.50	18	12.159	116	67.53	49	44.952	324	55.77	203
17	33.502	85	17.29	4	53.463	89	16.32	38	12.043	92	67.04	42	44.628	285	53.74	247
27	33.417	54	17.33	21	53.374	60	15.94	59	11.951	61	66.62	33	44.343	235	51.27	285
Okt. 7	33.363	16	17.54	41	53.314	23	15.35	82	11.890	22	66.29	19	44.108	173	48.42	318
17	33.347	28	17.95	62	53.291	20	14.53	105	11.868	24	66.10	2	43.935	104	45.24	346
27	33.375	75	18.57	85	53.311	67	13.48	129	11.892	74	66.08	19	43.831	26	41.78	366
Nov. 6	33.450	125	19.42	108	53.378	116	12.19	151	11.966	125	66.27	41	43.805	57	38.12	378
16	33.575	174	20.50	131	53.494	165	10.68	172	12.091	176	66.68	65	43.862	142	34.34	380
26	33.749	220	21.81	151	53.659	210	8.96	190	12.267	224	67.33	90	44.004	224	30.54	372
Dez. 6	33.969	260	23.32	169	53.869	251	7.06	202	12.491	266	68.23	113	44.228	304	26.82	354
16	34.229	292	25.01	181	54.120	285	5.04	208	12.757	301	69.36	132	44.532	373	23.28	324
26	34.521	317	26.82	187	54.405	309	2.96	209	13.058	324	70.68	148	44.905	430	20.04	284
36	34.838		28.69		54.714		0.87		13.382		72.16		45.335		17.20	
Mittl. Ort	31.583		4.80		51.585		26.71		10.056		52.12		44.204		56.18	
sec δ, tg δ	1.004		−0.094		1.001		+0.038		1.039		−0.282		1.974		+1.702	
a, *a′*	+3.2		−15.4		+3.0		−15.2		+3.3		−14.9		+1.5		−14.8	
b, *b′*	0.00		+ 0.64		0.00		+ 0.65		+0.01		+ 0.67		−0.08		+ 0.67	

Tag	550) β Ursae min. AR.		550) Dekl.		551) Pi XIV, 221 AR.		551) Dekl.		552) β Lupi AR.		552) Dekl.		555) β Bootis AR.		555) Dekl.	
1933	$14^h 50^m$		+74° 25′		$14^h 53^m$		+14° 42′		$14^h 54^m$		−42° 51′		$14^h 59^m$		+40° 38′	
Jan. 1	51.46	76	21.36	240	3.092	317	44.20	234	7.041	420	52.72	61	24.901	349	54.47	267
11	52.22	83	18.96	181	3.409	329	41.86	210	7.461	432	53.33	94	25.250	372	51.80	224
21	53.05	86	17.15	117	3.738	332	39.76	180	7.893	435	54.27	123	25.622	380	49.56	173
31	53.91	88	15.98	49	4.070	325	37.96	144	8.328	425	55.50	149	26.002	379	47.83	117
Feb. 10	54.79	86	15.49	19	4.395	312	36.52	104	8.753	407	56.99	170	26.381	367	46.66	56
20	55.65	81	15.68	85	4.707	292	35.48	62	9.160	384	58.69	185	26.748	345	46.10	4
März 2	56.46	73	16.53	148	4.999	267	34.86	19	9.544	354	60.54	196	27.093	317	46.14	61
12	57.19	63	18.01	201	5.266	240	34.67	21	9.898	321	62.50	202	27.410	281	46.75	115
22	57.82	52	20.02	247	5.506	209	34.88	58	10.219	285	64.52	204	27.691	242	47.90	163
Apr. 1	58.34	38	22.49	281	5.715	178	35.46	90	10.504	248	66.56	203	27.933	200	49.53	201
11	58.72	24	25.30	305	5.893	146	36.36	116	10.752	211	68.59	200	28.133	157	51.54	231
21	58.96	9	28.35	315	6.039	115	37.52	136	10.963	172	70.59	192	28.290	114	53.85	252
Mai 1	59.05	4	31.50	315	6.154	85	38.88	149	11.135	132	72.51	182	28.404	70	56.37	261
10	59.01	17	34.65	305	6.239	55	40.37	156	11.267	92	74.33	170	28.474	28	58.98	262
20	58.84	30	37.70	283	6.294	25	41.93	156	11.359	52	76.03	154	28.502	12	61.60	254
30	58.54	42	40.53	253	6.319	4	43.49	151	11.411	12	77.57	136	28.490	50	64.14	238
Juni 9	58.12	52	43.06	217	6.315	31	45.00	142	11.423	28	78.93	116	28.440	86	66.52	214
19	57.60	61	45.23	173	6.284	57	46.42	128	11.395	67	80.09	92	28.354	120	68.66	186
29	56.99	68	46.96	126	6.227	82	47.70	110	11.328	102	81.01	66	28.234	149	70.52	151
Juli 9	56.31	73	48.22	75	6.145	103	48.80	91	11.226	134	81.67	39	28.085	175	72.03	113
19	55.58	77	48.97	23	6.042	121	49.71	69	11.092	161	82.06	10	27.910	195	73.16	72
29	54.81	79	49.20	31	5.921	135	50.40	44	10.931	181	82.16	20	27.715	211	73.88	30
Aug. 8	54.02	79	48.89	84	5.786	144	50.84	19	10.750	193	81.96	50	27.504	218	74.18	14
18	53.23	77	48.05	135	5.642	145	51.03	7	10.557	195	81.46	77	27.286	220	74.04	58
28	52.46	74	46.70	184	5.497	141	50.96	34	10.362	187	80.69	104	27.066	213	73.46	102
Sept. 7	51.72	68	44.86	230	5.356	128	50.62	62	10.175	167	79.65	126	26.853	197	72.44	144
17	51.04	60	42.56	271	5.228	107	50.00	90	10.008	136	78.39	143	26.656	172	71.00	185
27	50.44	51	39.85	308	5.121	79	49.10	118	9.872	94	76.96	154	26.484	139	69.15	223
Okt. 7	49.93	41	36.77	339	5.042	42	47.92	146	9.778	43	75.42	157	26.345	96	66.92	257
17	49.52	28	33.38	364	5.000	1	46.46	173	9.735	17	73.85	155	26.249	47	64.35	288
27	49.24	14	29.74	379	5.001	47	44.73	197	9.752	81	72.30	143	26.202	9	61.47	313
Nov. 6	49.10	0	25.95	387	5.048	98	42.76	220	9.833	148	70.87	124	26.211	68	58.34	331
16	49.10	16	22.08	384	5.146	148	40.56	236	9.981	213	69.63	100	26.279	128	55.03	342
26	49.26	30	18.24	372	5.294	195	38.20	249	10.194	274	68.63	70	26.407	187	51.61	343
Dez. 6	49.56	44	14.52	349	5.489	238	35.71	254	10.468	329	67.93	36	26.594	242	48.18	335
16	50.00	58	11.03	314	5.727	274	33.17	252	10.797	372	67.57	0	26.836	290	44.83	317
26	50.58	70	7.89	269	6.001	303	30.65	242	11.169	404	67.57	37	27.126	329	41.66	288
36	51.28		5.20		6.304		28.23		11.573		67.94		27.455		38.78	
Mittl. Ort	52.83		45.50		3.427		57.26		7.967		55.83		25.333		73.89	
sec δ, tg δ	3.725		+3.588		1.034		+0.263		1.364		−0.928		1.318		+0.859	
a, *a′*	−0.2		−14.7		+2.8		−14.6		+3.9		−14.5		+2.3		−14.2	
b, *b′*	−0.18		+ 0.68		−0.01		+ 0.69		+0.04		+ 0.69		−0.04		+ 0.71	

Scheinbare Sternörter 1933

Tag	556) γ Scorpii AR.		556) γ Scorpii Dekl.		557) ψ Bootis AR.		557) ψ Bootis Dekl.	
1933	$15^h\ 0^m$		$-25°\ 1'$		$15^h\ 1^m$		$+27°\ 11'$	
	s		"		s		"	
Jan. 1	7.965	350	13.60	119	34.078	321	71.97	257
11	8.315	362	14.79	136	34.399	339	69.40	222
21	8.677	364	16.15	147	34.738	344	67.18	182
31	9.041	357	17.62	154	35.082	341	65.36	134
Feb. 10	9.398	343	19.16	155	35.423	330	64.02	84
20	9.741	323	20.71	153	35.753	310	63.18	32
März 2	10.064	298	22.24	147	36.063	285	62.86	19
12	10.362	271	23.71	138	36.348	255	63.05	68
22	10.633	243	25.09	127	36.603	223	63.73	111
Apr. 1	10.876	213	26.36	116	36.826	189	64.84	148
11	11.089	182	27.52	103	37.015	154	66.32	177
21	11.271	151	28.55	91	37.169	119	68.09	198
Mai 1	11.422	120	29.46	79	37.288	84	70.07	210
10	11.542	89	30.25	67	37.372	50	72.17	215
20	11.631	57	30.92	55	37.422	16	74.32	212
30	11.688	25	31.47	43	37.438	16	76.44	202
Juni 9	11.713	6	31.90	30	37.422	47	78.46	186
19	11.707	38	32.20	18	37.375	76	80.32	164
29	11.669	67	32.38	5	37.299	103	81.96	138
Juli 9	11.602	93	32.43	9	37.196	126	83.34	109
19	11.509	116	32.34	22	37.070	146	84.43	77
29	11.393	134	32.12	35	36.924	161	85.20	43
Aug. 8	11.259	145	31.77	48	36.763	170	85.63	8
18	11.114	150	31.29	59	36.593	173	85.71	28
28	10.964	145	30.70	68	36.420	169	85.43	64
Sept. 7	10.819	131	30.02	75	36.251	155	84.79	100
17	10.688	108	29.27	77	36.096	135	83.79	136
27	10.580	76	28.50	75	35.961	105	82.43	170
Okt. 7	10.504	35	27.75	69	35.856	68	80.73	202
17	10.469	12	27.06	57	35.788	24	78.71	231
27	10.481	65	26.49	41	35.764	26	76.40	257
Nov. 6	10.546	120	26.08	20	35.790	78	73.83	279
16	10.666	175	25.88	4	35.868	132	71.04	293
26	10.841	226	25.92	29	36.000	183	68.11	300
Dez. 6	11.067	271	26.21	56	36.183	230	65.11	300
16	11.338	309	26.77	81	36.413	272	62.11	289
26	11.647	337	27.58	104	36.685	304	59.22	271
36	11.984		28.62		36.989		56.51	
Mittl. Ort	8.590		11.86		34.466		88.33	
sec δ, tg δ	1.104		−0.467		1.124		+0.514	
a, *a'*	+3.5		−14.2		+2.6		−14.1	
b, *b'*	+0.02		+ 0.71		−0.02		+ 0.71	

Tag	558) ζ Lupi AR.		558) ζ Lupi Dekl.		560) γ Triang. austr. AR.		560) γ Triang. austr. Dekl.	
1933	$15^h\ 7^m$		$-51°\ 50'$		$15^h\ 12^m$		$-68°\ 25'$	
	s		"		s		"	
Jan. 1	26.210	474	39.96	13	35.07	73	55.51	53
11	26.684	493	40.09	52	35.80	76	54.98	4
21	27.177	500	40.61	89	36.56	78	54.94	45
31	27.677	495	41.50	123	37.34	78	55.39	91
Feb. 10	28.172	478	42.73	153	38.12	76	56.30	135
20	28.650	454	44.26	177	38.88	72	57.65	173
März 2	29.104	424	46.03	197	39.60	68	59.38	207
12	29.528	387	48.00	213	40.28	63	61.45	236
22	29.915	348	50.13	223	40.91	56	63.81	259
Apr. 1	30.263	306	52.36	230	41.47	49	66.40	277
11	30.569	262	54.66	232	41.96	42	69.17	288
21	30.831	216	56.98	230	42.38	33	72.05	294
Mai 1	31.047	169	59.28	224	42.71	25	74.99	294
10	31.216	119	61.52	215	42.96	16	77.93	288
20	31.335	69	63.67	201	43.12	8	80.81	276
30	31.404	19	65.68	184	43.20	2	83.57	258
Juni 9	31.423	31	67.52	162	43.18	10	86.15	234
19	31.392	79	69.14	136	43.08	19	88.49	205
29	31.313	124	70.50	108	42.89	26	90.54	169
Juli 9	31.189	165	71.58	75	42.63	33	92.23	129
19	31.024	199	72.33	41	42.30	39	93.52	86
29	30.825	225	72.74	4	41.91	43	94.38	39
Aug. 8	30.600	242	72.78	32	41.48	45	94.77	9
18	30.358	247	72.46	68	41.03	47	94.68	58
28	30.111	240	71.78	103	40.56	45	94.10	106
Sept. 7	29.871	219	70.75	134	40.11	41	93.04	149
17	29.652	183	69.41	159	39.70	35	91.55	188
27	29.469	137	67.82	179	39.35	27	89.67	220
Okt. 7	29.332	77	66.03	191	39.08	18	87.47	243
17	29.255	9	64.12	195	38.90	7	85.04	258
27	29.246	66	62.17	191	38.83	6	82.46	261
Nov. 6	29.312	144	60.26	177	38.89	18	79.85	254
16	29.456	222	58.49	155	39.07	30	77.31	237
26	29.678	294	56.94	127	39.37	42	74.94	210
Dez. 6	29.972	358	55.67	93	39.79	53	72.84	174
16	30.330	413	54.74	55	40.32	62	71.10	133
26	30.743	455	54.19	15	40.94	70	69.77	86
36	31.198		54.04		41.64		68.91	
Mittl. Ort	27.493		44.27		37.61		62.18	
sec δ, tg δ	1.619		−1.273		2.721		−2.530	
a, *a'*	+4.3		−13.7		+5.6		−13.4	
b, *b'*	+0.06		+ 0.73		+0.11		+ 0.75	

Tag	563) δ Bootis				564) β Librae				565) 1 H. Ursae min.				566) φ^1 Lupi			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$15^h\ 12^m$		+33° 33′		$15^h\ 13^m$		−9° 8′		$15^h\ 13^m$		+67° 35′		$15^h\ 17^m$		−36° 1′	
Jan. 1	47.612	324	31.92	270	23.384	317	19.57	166	50.44	53	40.09	273	31.956	376	10.76	62
11	47.936	345	29.22	231	23.701	329	21.23	167	50.97	59	37.36	219	32.332	393	11.38	89
21	48.281	355	26.91	187	24.030	335	22.90	162	51.56	63	35.17	158	32.725	400	12.27	111
31	48.636	356	25.04	135	24.365	330	24.52	151	52.19	65	33.59	92	33.125	395	13.38	130
Feb. 10	48.992	346	23.69	80	24.695	320	26.03	136	52.84	64	32.67	23	33.520	384	14.68	144
20	49.338	328	22.89	24	25.015	303	27.39	117	53.48	61	32.44	45	33.904	365	16.12	153
März 2	49.666	304	22.65	32	25.318	281	28.56	95	54.09	56	32.89	109	34.269	342	17.65	159
12	49.970	275	22.97	85	25.599	258	29.51	72	54.65	50	33.98	169	34.611	315	19.24	161
22	50.245	241	23.82	131	25.857	232	30.23	50	55.15	43	35.67	219	34.926	286	20.85	161
Apr. 1	50.486	205	25.13	171	26.089	205	30.73	29	55.58	34	37.86	260	35.212	254	22.46	157
11	50.691	168	26.84	203	26.294	178	31.02	10	55.92	25	40.46	290	35.466	222	24.03	152
21	50.859	131	28.87	225	26.472	149	31.12	6	56.17	15	43.36	310	35.688	188	25.55	146
Mai 1	50.990	92	31.12	238	26.621	120	31.06	20	56.32	6	46.46	316	35.876	153	27.01	137
10*)	51.082	54	33.50	244	26.741	92	30.86	31	56.38	4	49.62	313	36.029	117	28.38	127
20	51.136	17	35.94	239	26.833	62	30.55	38	56.34	13	52.75	299	36.146	80	29.65	116
30	51.153	19	38.33	228	26.895	33	30.17	44	56.21	21	55.74	276	36.226	42	30.81	103
Juni 9	51.134	53	40.61	209	26.928	3	29.73	48	56.00	29	58.50	244	36.268	4	31.84	88
19	51.081	85	42.70	185	26.931	26	29.25	49	55.71	36	60.94	207	36.272	33	32.72	71
29	50.996	115	44.55	156	26.905	54	28.76	50	55.35	42	63.01	163	36.239	69	33.43	53
Juli 9	50.881	141	46.11	123	26.851	79	28.26	49	54.93	47	64.64	116	36.170	101	33.96	32
19	50.740	164	47.34	87	26.772	102	27.77	48	54.46	50	65.80	65	36.069	130	34.28	10
29	50.576	180	48.21	49	26.670	120	27.29	45	53.96	53	66.45	13	35.939	154	34.38	12
Aug. 8	50.396	192	48.70	9	26.550	133	26.84	42	53.43	55	66.58	39	35.785	170	34.26	34
18	50.204	196	48.79	31	26.417	139	26.42	37	52.88	54	66.19	91	35.615	177	33.92	57
28	50.008	193	48.48	71	26.278	138	26.05	32	52.34	52	65.28	142	35.438	175	33.35	77
Sept. 7	49.815	180	47.77	112	26.140	127	25.73	23	51.82	50	63.86	191	35.263	162	32.58	94
17	49.635	160	46.65	151	26.013	109	25.50	12	51.32	45	61.95	236	35.101	138	31.64	108
27	49.475	131	45.14	188	25.904	82	25.38	0	50.87	39	59.59	277	34.963	104	30.56	117
Okt. 7	49.344	92	43.26	222	25.822	46	25.38	16	50.48	32	56.82	314	34.859	60	29.39	119
17	49.252	47	41.04	254	25.776	4	25.54	33	50.16	23	53.68	343	34.799	8	28.20	117
27	49.205	4	38.50	281	25.772	44	25.87	54	49.93	13	50.25	366	34.791	50	27.03	107
Nov. 6	49.209	59	35.69	302	25.816	94	26.41	75	49.80	3	46.59	381	34.841	111	25.96	91
16	49.268	115	32.67	316	25.910	144	27.16	97	49.77	8	42.78	386	34.952	171	25.05	70
26	49.383	171	29.51	323	26.054	193	28.13	117	49.85	19	38.92	381	35.123	230	24.35	45
Dez. 6	49.554	222	26.28	320	26.247	237	29.30	136	50.04	30	35.11	365	35.353	282	23.90	16
16	49.776	267	23.08	308	26.484	274	30.66	150	50.34	40	31.46	338	35.635	326	23.74	13
26	50.043	304	20.00	286	26.758	301	32.16	161	50.74	48	28.08	299	35.961	360	23.87	42
36	50.347		17.14		27.059		33.77		51.22		25.09		36.321		24.29	
Mittl. Ort	48.100		49.63		23.914		12.97		51.73		63.03		32.828		11.06	
sec δ, tg δ	1.200		+0.664		1.013		−0.161		2.624		+2.426		1.236		−0.727	
a, *a′*	+2.4		−13.4		+3.2		−13.3		+0.6		−13.3		+3.8		−13.0	
b, *b′*	−0.03		+ 0.75		+0.01		+ 0.75		−0.11		+ 0.75		+0.03		+ 0.76	

*) Bei Stern 564), 565) und 566) lies Mai 11

Tag	569) γ Ursae min. AR.		Dekl.		568) μ Bootis AR.		Dekl.	
1933	15h 20m		+72° 3′		15h 21m		+37° 36′	
Jan. 1	47.39	62	57.61	273	56.949	324	21.95	278
11	48.01	69	54.88	219	57.273	349	19.17	238
21	48.70	74	52.69	158	57.622	363	16.79	192
31	49.44	77	51.11	92	57.985	366	14.87	137
Feb. 10	50.21	77	50.19	24	58.351	358	13.50	80
20	50.98	74	49.95	45	58.709	343	12.70	21
März 2	51.72	69	50.40	109	59.052	319	12.49	37
12	52.41	61	51.49	169	59.371	290	12.86	93
22	53.02	53	53.18	220	59.661	256	13.79	142
Apr. 1	53.55	42	55.38	262	59.917	219	15.21	183
11	53.97	30	58.00	293	60.136	180	17.04	217
21	54.27	19	60.93	312	60.316	139	19.21	241
Mai 1	54.46	6	64.05	320	60.455	99	21.62	256
11	[12] 54.52	6	67.25	317	[13] 60.554	59	24.18	261
20	54.46	17	70.42	303	60.613	19	26.79	257
30	54.29	28	73.45	281	60.632	20	29.36	245
Juni 9	54.01	38	76.26	249	60.612	58	31.81	226
19	53.63	47	78.75	212	60.554	92	34.07	200
29	53.16	54	80.87	169	60.462	125	36.07	170
Juli 9	52.62	60	82.56	121	60.337	154	37.77	134
19	52.02	65	83.77	70	60.183	178	39.11	97
29	51.37	68	84.47	18	60.005	197	40.08	56
Aug. 8	50.69	71	84.65	34	59.808	210	40.64	14
18	49.98	70	84.31	87	59.598	216	40.78	29
28	49.28	68	83.44	138	59.382	213	40.49	72
Sept. 7	48.60	65	82.06	187	59.169	202	39.77	114
17	47.95	59	80.19	233	58.967	182	38.63	155
27	47.36	52	77.86	274	58.785	152	37.08	195
Okt. 7	46.84	44	75.12	310	58.633	114	35.13	231
17	46.40	33	72.02	340	58.519	68	32.82	264
27	46.07	21	68.62	364	58.451	15	30.18	291
Nov. 6	45.86	9	64.98	379	58.436	42	27.27	314
16	45.77	5	61.19	384	58.478	100	24.13	328
26	45.82	18	57.35	379	58.578	158	20.85	335
Dez. 6	46.00	32	53.56	364	58.736	213	17.50	332
16	46.32	44	49.92	337	58.949	262	14.18	318
26	46.76	55	46.55	299	59.211	302	11.00	295
36	47.31		43.56		59.513		8.05	
Mittl. Ort	49.21		80.60		57.533		40.34	
sec δ, tg δ	3.249		+3.091		1.262		+0.770	
a, *a′*	−0.1		−12.8		+2.3		−12.8	
b, *b′*	−0.13		+ 0.77		−0.03		+ 0.77	

Tag	571) ι Draconis AR.		Dekl.		572) β Coron. bor. AR.		Dekl.	
1933	15h 23m		+59° 11′		15h 25m		+29° 19′	
Jan. 1	25.186	418	39.04	286	3.444	308	51.57	267
11	25.604	462	36.18	236	3.752	330	48.90	235
21	26.066	491	33.82	179	4.082	342	46.55	193
31	26.557	503	32.03	114	4.424	343	44.62	146
Feb. 10	27.060	499	30.89	48	4.767	337	43.16	94
20	27.559	481	30.41	20	5.104	322	42.22	40
März 2	28.040	447	30.61	85	5.426	300	41.82	14
12	28.487	403	31.46	145	5.726	275	41.96	65
22	28.890	350	32.91	198	6.001	245	42.61	112
Apr. 1	29.240	289	34.89	242	6.246	212	43.73	152
11	29.529	223	37.31	276	6.458	178	45.25	184
21	29.752	156	40.07	298	6.636	142	47.09	209
Mai 1	29.908	86	43.05	310	6.778	107	49.18	225
11	[13] 29.994	18	46.15	311	[13] 6.885	72	51.43	231
20	30.012	48	49.26	300	6.957	36	53.74	231
30	29.964	111	52.26	282	6.993	1	56.05	222
Juni 9	29.853	170	55.08	255	6.994	34	58.27	206
19	29.683	224	57.63	221	6.960	66	60.33	186
29	29.459	271	59.84	182	6.894	96	62.19	160
Juli 9	29.188	312	61.66	136	6.798	124	63.79	130
19	28.876	345	63.02	89	6.674	147	65.09	97
29	28.531	369	63.91	39	6.527	167	66.06	62
Aug. 8	28.162	383	64.30	11	6.360	180	66.68	25
18	27.779	388	64.19	63	6.180	187	66.93	12
28	27.391	379	63.56	114	5.993	186	66.81	51
Sept. 7	27.012	362	62.42	162	5.807	176	66.30	89
17	26.650	329	60.80	209	5.631	158	65.41	127
27	26.321	287	58.71	251	5.473	132	64.14	163
Okt. 7	26.034	232	56.20	290	5.341	96	62.51	197
17	25.802	166	53.30	323	5.245	53	60.54	230
27	25.636	93	50.07	350	5.192	4	58.24	257
Nov. 6	25.543	11	46.57	368	5.188	49	55.67	280
16	25.532	74	42.89	377	5.237	103	52.87	297
26	25.606	158	39.12	378	5.340	157	49.90	307
Dez. 6	25.764	240	35.34	366	5.497	207	46.83	307
16	26.004	316	31.68	344	5.704	252	43.76	299
26	26.320	381	28.24	309	5.956	288	40.77	281
36	26.701		25.15		6.244		37.96	
Mittl. Ort	26.203		60.81		3.991		68.18	
sec δ, tg δ	1.953		+1.677		1.147		+0.562	
a, *a′*	+1.3		−12.7		+2.5		−12.5	
b, *b′*	−0.07		+ 0.78		−0.02		+ 0.78	

Tag	573) ν¹ Bootis AR.	Δ	573) ν¹ Bootis Dekl.	Δ	575) γ Lupi AR.	Δ	575) γ Lupi Dekl.	Δ
1933	15ʰ 28ᵐ		+41° 3′		15ʰ 30ᵐ		−40° 56′	
Jan. 1	30.667	327	19.07	285	38.983	391	34.41	29
11	30.994	355	16.22	244	39.374	411	34.70	59
21	31.349	372	13.78	196	39.785	421	35.29	86
31	31.721	377	11.82	140	40.206	420	36.15	109
Feb. 10	32.098	372	10.42	80	40.626	411	37.24	128
20	32.470	357	9.62	19	41.037	394	38.52	143
März 2	32.827	334	9.43	40	41.431	372	39.95	154
12	33.161	305	9.83	98	41.803	346	41.49	162
22	33.466	270	10.81	149	42.149	317	43.11	167
Apr. 1	33.736	232	12.30	192	42.466	285	44.78	168
11	33.968	191	14.22	227	42.751	251	46.46	167
21	34.159	148	16.49	253	43.002	216	48.13	164
Mai 1	34.307	106	19.02	267	43.218	178	49.77	159
11	[14] 34.413	62	21.69	274	[15] 43.396	139	51.36	152
20	34.475	19	24.43	269	43.535	99	52.88	142
30	34.494	23	27.12	258	43.634	57	54.30	130
Juni 9	34.471	62	29.70	237	43.691	15	55.60	115
19	34.409	100	32.07	212	43.706	27	56.75	98
29	34.309	135	34.19	179	43.679	67	57.73	78
Juli 9	34.174	165	35.98	143	43.612	104	58.51	55
19	34.009	192	37.41	103	43.508	138	59.06	31
29	33.817	213	38.44	61	43.370	165	59.37	5
Aug. 8	33.604	227	39.05	17	43.205	185	59.42	21
18	33.377	234	39.22	28	43.020	195	59.21	47
28	33.143	232	38.94	72	42.825	195	58.74	73
Sept. 7	32.911	222	38.22	117	42.630	183	58.01	96
17	32.689	201	37.05	160	42.447	161	57.05	115
27	32.488	171	35.45	200	42.286	126	55.90	129
Okt. 7	32.317	132	33.45	238	42.160	81	54.61	137
17	32.185	85	31.07	272	42.079	26	53.24	140
27	32.100	31	28.35	301	42.053	35	51.84	134
Nov. 6	32.069	28	25.34	323	42.088	99	50.50	123
16	32.097	88	22.11	339	42.187	165	49.27	104
26	32.185	149	18.72	345	42.352	227	48.23	81
Dez. 6	32.334	208	15.27	341	42.579	284	47.42	54
16	32.542	259	11.86	327	42.863	333	46.88	23
26	32.801	302	8.59	303	43.196	371	46.65	8
36	33.103		5.56		43.567		46.73	
Mittl. Ort	31.337		37.96		40.016		35.16	
sec δ, tg δ	1.326		+0.871		1.324		−0.868	
a, *a′*	+2.2		−12.3		+4.0		−12.2	
b, *b′*	−0.04		+ 0.79		+0.04		+ 0.80	

Tag	577) γ Librae AR.	Δ	577) γ Librae Dekl.	Δ	578) α Coron. bor. AR.	Δ	578) α Coron. bor. Dekl.	Δ
1933	15ʰ 31ᵐ		−14° 34′		15ʰ 31ᵐ		+26° 55′	
Jan. 1	45.841	315	8.07	138	50.459	302	64.71	266
11	46.156	331	9.45	143	50.761	323	62.05	235
21	46.487	339	10.88	144	51.084	336	59.70	196
31	46.826	337	12.32	140	51.420	339	57.74	152
Feb. 10	47.163	330	13.72	130	51.759	333	56.22	101
20	47.493	316	15.02	117	52.092	319	55.21	48
März 2	47.809	297	16.19	102	52.411	300	54.73	3
12	48.106	276	17.21	84	52.711	276	54.76	54
22	48.382	252	18.05	66	52.987	247	55.30	101
Apr. 1	48.634	227	18.71	48	53.234	217	56.31	140
11	48.861	200	19.19	33	53.451	184	57.71	173
21	49.061	172	19.52	18	53.635	150	59.44	198
Mai 1	49.233	143	19.70	7	53.785	116	61.42	215
11	[15] 49.376	114	19.77	3	[15] 53.901	82	63.57	224
20	49.490	84	19.74	12	53.983	46	65.81	223
30	49.574	52	19.62	18	54.029	12	68.04	217
Juni 9	49.626	20	19.44	22	54.041	22	70.21	203
19	49.646	12	19.22	27	54.019	55	72.24	184
29	49.634	42	18.95	30	53.964	86	74.08	160
Juli 9	49.592	71	18.65	33	53.878	114	75.68	131
19	49.521	97	18.32	35	53.764	138	76.99	101
29	49.424	119	17.97	38	53.626	159	78.00	68
Aug. 8	49.305	135	17.59	39	53.467	173	78.68	32
18	49.170	145	17.20	39	53.294	181	79.00	4
28	49.025	146	16.81	39	53.113	182	78.96	41
Sept. 7	48.879	138	16.42	36	52.931	173	78.55	78
17	48.741	121	16.06	32	52.758	157	77.77	114
27	48.620	96	15.74	23	52.601	131	76.63	150
Okt. 7	48.524	61	15.51	13	52.470	97	75.13	184
17	48.463	19	15.38	1	52.373	55	73.29	216
27	48.444	29	15.39	18	52.318	7	71.13	245
Nov. 6	48.473	80	15.57	37	52.311	44	68.68	267
16	48.553	131	15.94	57	52.355	98	66.01	286
26	48.684	182	16.51	77	52.453	151	63.15	297
Dez. 6	48.866	228	17.28	98	52.604	201	60.18	300
16	49.094	267	18.26	115	52.805	245	57.18	293
26	49.361	298	19.41	129	53.050	281	54.25	278
36	49.659		20.70		53.331		51.47	
Mittl. Ort	46.486		2.45		51.035		80.69	
sec δ, tg δ	1.033		−0.260		1.122		+0.508	
a, *a′*	+3.4		−12.1		+2.5		−12.1	
b, *b′*	+0.01		+ 0.80		−0.02		+ 0.80	

Scheinbare Sternörter 1933

Tag	582) α Serpentis AR.	Diff.	582) α Serpentis Dekl.	Diff.	583) β Serpentis AR.	Diff.	583) β Serpentis Dekl.	Diff.
1933	15h 40m		+6° 37′		15h 43m		+15° 37′	
Jan. 1	57.381	291	55.59	212	5.075	287	35.69	240
11	57.672	309	53.47	199	5.362	309	33.29	220
21	57.981	319	51.48	178	5.671	320	31.09	190
31	58.300	321	49.70	152	5.991	324	29.19	156
Feb. 10	58.621	316	48.18	120	6.315	319	27.63	116
20	58.937	304	46.98	85	6.634	308	26.47	72
März 2	59.241	287	46.13	49	6.942	291	25.75	28
12	59.528	267	45.64	12	7.233	270	25.47	15
22	59.795	244	45.52	22	7.503	247	25.62	56
Apr. 1	60.039	219	45.74	53	7.750	220	26.18	93
11	60.258	192	46.27	80	7.970	192	27.11	123
21	60.450	165	47.07	102	8.162	163	28.34	146
Mai 1	60.615	136	48.09	117	8.325	133	29.80	165
11	60.751	106	49.26	128	8.458	102	31.45	175
20	[18] 60.857	76	50.54	133	[18] 8.560	70	33.20	178
30	60.933	45	51.87	133	8.630	37	34.98	176
Juni 9	60.978	14	53.20	130	8.667	5	36.74	169
19	60.992	17	54.50	121	8.672	26	38.43	155
29	60.975	47	55.71	109	8.646	57	39.98	139
Juli 9	60.928	75	56.80	96	8.589	86	41.37	119
19	60.853	100	57.76	81	8.503	111	42.56	96
29	60.753	122	58.57	63	8.392	134	43.52	71
Aug. 8	60.631	138	59.20	45	8.258	149	44.23	45
18	60.493	149	59.65	25	8.109	160	44.68	17
28	60.344	151	59.90	3	7.949	162	44.85	12
Sept. 7	60.193	145	59.93	19	7.787	157	44.73	41
17	60.048	131	59.74	42	7.630	143	44.32	71
27	59.917	108	59.32	65	7.487	119	43.61	100
Okt. 7	59.809	76	58.67	89	7.368	88	42.61	130
17	59.733	38	57.78	115	7.280	49	41.31	159
27	59.695	7	56.63	138	7.231	5	39.72	185
Nov. 6	59.702	55	55.25	161	7.226	45	37.87	209
16	59.757	105	53.64	182	7.271	96	35.78	230
26	59.862	154	51.82	198	7.367	146	33.48	244
Dez. 6	60.016	200	49.84	209	7.513	192	31.04	252
16	60.216	240	47.75	215	7.705	234	28.52	254
26	60.456	272	45.60	214	7.939	269	25.98	246
36	60.728		43.46		8.208		23.52	
Mittl. Ort	57.969		66.75		5.675		48.99	
sec δ, tg δ	1.007		+0.116		1.038		+0.280	
a, a′	+2.9		−11.4		+2.8		−11.3	
b, b′	0.00		+ 0.82		−0.01		+ 0.83	

Tag	584) κ Serpentis AR.	Diff.	584) κ Serpentis Dekl.	Diff.	585) μ Serpentis AR.	Diff.	585) μ Serpentis Dekl.	Diff.
1933	15h 45m		+18° 20′		15h 46m		−3° 13′	
Jan. 1	42.771	286	36.21	248	6.637	292	44.23	176
11	43.057	308	33.73	226	6.929	311	45.99	171
21	43.365	321	31.47	194	7.240	322	47.70	161
31	43.686	325	29.53	157	7.562	323	49.31	144
Feb. 10	44.011	321	27.96	115	7.885	319	50.75	122
20	44.332	310	26.81	70	8.204	307	51.97	98
März 2	44.642	294	26.11	22	8.511	292	52.95	71
12	44.936	274	25.89	23	8.803	272	53.66	43
22	45.210	249	26.12	65	9.075	251	54.09	16
Apr. 1	45.459	223	26.77	104	9.326	227	54.25	10
11	45.682	195	27.81	135	9.553	201	54.15	31
21	45.877	165	29.16	160	9.754	175	53.84	49
Mai 1	46.042	133	30.76	178	9.929	148	53.35	64
11	46.175	101	32.54	188	10.077	118	52.71	74
20	[19] 46.276	70	34.42	192	[19] 10.195	88	51.97	81
30	46.346	37	36.34	189	10.283	58	51.16	83
Juni 9	46.383	3	38.23	181	10.341	26	50.33	83
19	46.386	29	40.04	166	10.367	6	49.50	81
29	46.357	60	41.70	148	10.361	37	48.69	76
Juli 9	46.297	89	43.18	126	10.324	66	47.93	69
19	46.208	116	44.44	101	10.258	92	47.24	61
29	46.092	137	45.45	74	10.166	115	46.63	53
Aug. 8	45.955	155	46.19	46	10.051	133	46.10	43
18	45.800	165	46.65	16	9.918	144	45.67	32
28	45.635	167	46.81	15	9.774	148	45.35	20
Sept. 7	45.468	163	46.66	46	9.626	142	45.15	7
17	45.305	149	46.20	78	9.484	129	45.08	8
27	45.156	126	45.42	110	9.355	107	45.16	24
Okt. 7	45.030	94	44.32	141	9.248	75	45.40	42
17	44.936	55	42.91	170	9.173	36	45.82	61
27	44.881	11	41.21	197	9.137	9	46.43	82
Nov. 6	44.870	39	39.24	223	9.146	58	47.25	103
16	44.909	91	37.01	242	9.204	108	48.28	122
26	45.000	141	34.59	257	9.312	157	49.50	141
Dez. 6	45.141	188	32.02	265	9.469	202	50.91	156
16	45.329	231	29.37	263	9.671	242	52.47	167
26	45.560	267	26.74	256	9.913	275	54.14	172
36	45.827		24.18		10.188		55.86	
Mittl. Ort	43.390		50.11		7.270		35.44	
sec δ, tg δ	1.054		+0.332		1.002		−0.056	
a, a′	+2.7		−11.1		+3.1		−11.1	
b, b′	−0.01		+ 0.83		0.00		+ 0.83	

Tag	590) ζ Ursae min. AR.	Δ	590) Dekl.	Δ	588) ε Serpentis AR.	Δ	588) Dekl.	Δ	589) β Triang. austr. AR.	Δ	589) Dekl.	Δ	593) ε Coron. bor. AR.	Δ	593) Dekl.	Δ
1933	15h 46m		+77° 59′		15h 47m		+4° 40′		15h 49m		−63° 13′		15h 54m		+27° 3′	
Jan. 1	20.95	75	43.25	287	27.843	287	30.61	204	11.11	57	29.81	83	48.044	284	59.12	271
11	21.70	89	40.38	237	28.130	306	28.57	193	11.68	62	28.98	39	48.328	309	56.41	244
21	22.59	100	38.01	179	28.436	318	26.64	175	12.30	65	28.59	4	48.637	327	53.97	207
31	23.59	107	36.22	116	28.754	320	24.89	150	12.95	65	28.63	45	48.964	333	51.90	162
Feb. 10	24.66	109	35.06	49	29.074	316	23.39	121	13.60	65	29.08	85	49.297	332	50.28	113
20	25.75	107	34.57	20	29.390	305	22.18	88	14.25	64	29.93	121	49.629	324	49.15	61
März 2	26.82	103	34.77	85	29.695	290	21.30	53	14.89	61	31.14	154	49.953	308	48.54	7
12	27.85	94	35.62	147	29.985	270	20.77	18	15.50	57	32.68	182	50.261	289	48.47	44
22	28.79	81	37.09	202	30.255	249	20.59	15	16.07	52	34.50	206	50.550	263	48.91	93
Apr. 1	29.60	67	39.11	247	30.504	224	20.74	45	16.59	48	36.56	226	50.813	235	49.84	135
11	30.27	52	41.58	282	30.728	198	21.19	72	17.07	43	38.82	241	51.048	205	51.19	170
21	30.79	34	44.40	306	30.926	172	21.91	92	17.50	36	41.23	251	51.253	173	52.89	199
Mai 1	31.13	15	47.46	319	31.098	144	22.83	109	17.86	30	43.74	257	51.426	139	54.88	219
11	31.28	3	50.65	321	31.242	114	23.92	119	18.16	23	46.31	257	51.565	105	57.07	229
20*)	[19] 31.25	21	53.86	312	[19] 31.356	83	25.11	125	[20] 18.39	15	48.88	252	51.670	69	59.36	232
30	31.04	38	56.98	294	31.439	53	26.36	126	18.54	8	51.40	243	[21] 51.739	32	61.68	228
Juni 9	30.66	53	59.92	267	31.492	21	27.62	122	18.62	1	53.83	226	51.771	3	63.96	217
19	30.13	68	62.59	233	31.513	11	28.84	115	18.63	7	56.09	205	51.768	38	66.13	199
29	29.45	81	64.92	193	31.502	41	29.99	106	18.56	14	58.14	178	51.730	72	68.12	177
Juli 9	28.64	91	66.85	148	31.461	70	31.05	93	18.42	21	59.92	146	51.658	104	69.89	150
19	27.73	100	68.33	99	31.391	97	31.98	79	18.21	27	61.38	110	51.554	132	71.39	119
29	26.73	106	69.32	48	31.294	119	32.77	63	17.94	31	62.48	69	51.422	156	72.58	87
Aug. 8	25.67	109	69.80	3	31.175	136	33.40	46	17.63	35	63.17	27	51.266	174	73.45	51
18	24.58	111	69.77	56	31.039	147	33.86	28	17.28	37	63.44	18	51.092	186	73.96	14
28	23.47	110	69.21	107	30.892	152	34.14	9	16.91	37	63.26	63	50.906	190	74.10	23
Sept. 7	22.37	106	68.14	157	30.740	146	34.23	12	16.54	36	62.63	105	50.716	186	73.87	60
17	21.31	99	66.57	203	30.594	133	34.11	33	16.18	32	61.58	144	50.530	173	73.27	98
27	20.32	90	64.54	247	30.461	111	33.78	55	15.86	27	60.14	179	50.357	150	72.29	134
Okt. 7	19.42	79	62.07	287	30.350	80	33.23	79	15.59	20	58.35	207	50.207	118	70.95	170
17	18.63	65	59.20	319	30.270	42	32.44	102	15.39	11	56.28	225	50.089	79	69.25	204
27	17.98	48	56.01	346	30.228	2	31.42	126	15.28	2	54.03	236	50.010	33	67.21	233
Nov. 6	17.50	31	52.55	366	30.230	51	30.16	148	15.26	9	51.67	237	49.977	18	64.88	259
16	17.19	12	48.89	375	30.281	100	28.68	168	15.35	19	49.30	227	49.995	72	62.29	280
26	17.07	9	45.14	375	30.381	150	27.00	185	15.54	29	47.03	208	50.067	125	59.49	293
Dez. 6	17.16	29	41.39	365	30.531	195	25.15	198	15.83	38	44.95	182	50.192	176	56.56	298
16	17.45	47	37.74	344	30.726	235	23.17	205	16.21	47	43.13	149	50.368	222	53.58	296
26	17.92	66	34.30	310	30.961	269	21.12	205	16.68	54	41.64	110	50.590	262	50.62	282
36	18.58		31.20		31.230		19.07		17.22		40.54		50.852		47.80	
Mittl. Ort	24.59		65.29		28.461		41.34		13.28		33.29		48.754		74.72	
sec δ, tg δ	4.810		+4.705		1.003		+0.082		2.220		−1.982		1.123		+0.511	
a, *a′*	−2.2		−11.0		+3.0		−11.0		+5.3		−10.8		+2.5		−10.4	
b, *b′*	−0.17		+ 0.83		0.00		+ 0.84		+0.07		+ 0.84		−0.02		+ 0.85	

*) Bei Stern 593) lies Mai 21

Tag	594) δ Scorpii AR.		594) δ Scorpii Dekl.		598) ϑ Draconis AR.		598) ϑ Draconis Dekl.		597) β Scorpii AR.		597) β Scorpii Dekl.		603) δ Ophiuchi AR.		603) δ Ophiuchi Dekl.	
1933	15h 56m		−22° 25′		16h 0m		+58° 44′		16h 1m		−19° 37′		16h 10m		−3° 31′	
Jan. 1	21.250 s	315	61.91″	89	36.429 s	361	17.31″	312	31.436 s	305	30.17″	98	49.212 s	276	32.67″	166
11	21.565	335	62.80	101	36.790	415	14.19	268	31.741	327	31.15	108	49.488	299	34.33	163
21	21.900	347	63.81	110	37.205	455	11.51	216	32.068	339	32.23	114	49.787	314	35.96	153
31	22.247	351	64.91	113	37.660	479	9.35	155	32.407	343	33.37	114	50.101	319	37.49	137
Feb. 10	22.598	346	66.04	113	38.139	489	7.80	90	32.750	341	34.51	111	50.420	318	38.86	116
20	22.944	337	67.17	109	38.628	483	6.90	22	33.091	332	35.62	104	50.738	311	40.02	93
März 2	23.281	322	68.26	102	39.111	463	6.68	45	33.423	318	36.66	94	51.049	300	40.95	65
12	23.603	303	69.28	92	39.574	432	7.13	109	33.741	300	37.60	82	51.349	284	41.60	38
22	23.906	282	70.20	82	40.006	388	8.22	167	34.041	280	38.42	70	51.633	266	41.98	11
Apr. 1	24.188	259	71.02	72	40.394	338	9.89	218	34.321	257	39.12	57	51.899	245	42.09	14
11	24.447	233	71.74	62	40.732	279	12.07	259	34.578	233	39.69	44	52.144	222	41.95	36
21	24.680	206	72.36	52	41.011	216	14.66	290	34.811	207	40.13	34	52.366	197	41.59	55
Mai 1	24.886	177	72.88	43	41.227	150	17.56	310	35.018	179	40.47	25	52.563	170	41.04	70
11	25.063	146	73.31	36	41.377	82	20.66	319	35.197	148	40.72	18	52.733	142	40.34	79
21	25.209	113	73.67	29	41.459	14	23.85	317	35.345	116	40.90	11	52.875	112	39.55	86
30	25.322	80	73.96	23	41.473	51	27.02	306	35.461	83	41.01	5	52.987	80	38.69	89
Juni 9	25.402	44	74.19	17	41.422	116	30.08	287	35.544	48	41.06	1	53.067	47	37.80	88
19	25.446	9	74.36	11	41.306	176	32.95	258	35.592	12	41.07	3	53.114	13	36.92	85
29	25.455	27	74.47	4	41.130	232	35.53	224	35.604	22	41.04	8	53.127	20	36.07	79
Juli 9	25.428	61	74.51	2	40.898	281	37.77	184	35.582	56	40.96	12	53.107	52	35.28	73
19	25.367	92	74.49	10	40.617	324	39.61	139	35.526	87	40.84	17	53.055	82	34.55	64
29	25.275	118	74.39	17	40.293	359	41.00	91	35.439	115	40.67	23	52.973	109	33.91	55
Aug. 8	25.157	140	74.22	26	39.934	381	41.91	42	35.324	135	40.44	27	52.864	129	33.36	44
18	25.017	153	73.96	34	39.553	397	42.33	9	35.189	151	40.17	32	52.735	145	32.92	34
28	24.864	159	73.62	41	39.156	400	42.24	61	35.038	157	39.85	37	52.590	152	32.58	22
Sept. 7	24.705	155	73.21	46	38.756	391	41.63	112	34.881	154	39.48	39	52.438	152	32.36	9
17	24.550	141	72.75	50	38.365	370	40.51	161	34.727	141	39.09	41	52.286	141	32.27	5
27	24.409	118	72.25	51	37.995	335	38.90	207	34.586	119	38.68	39	52.145	122	32.32	20
Okt. 7	24.291	84	71.74	47	37.660	288	36.83	251	34.467	86	38.29	35	52.023	93	32.52	37
17	24.207	41	71.27	41	37.372	230	34.32	289	34.381	46	37.94	26	51.930	56	32.89	56
27	24.166	7	70.86	31	37.142	160	31.43	323	34.335	1	37.68	15	51.874	14	33.45	75
Nov. 6	24.173	59	70.55	17	36.982	84	28.20	348	34.336	53	37.53	0	51.860	34	34.20	95
16	24.232	114	70.38	1	36.898	1	24.72	366	34.389	106	37.53	17	51.894	84	35.15	113
26	24.346	167	70.39	20	36.897	85	21.06	374	34.495	158	37.70	35	51.978	134	36.28	131
Dez. 6	24.513	216	70.59	39	36.982	168	17.32	371	34.653	208	38.05	54	52.112	180	37.59	147
16	24.729	260	70.98	59	37.150	248	13.61	357	34.861	250	38.59	72	52.292	222	39.06	157
26	24.989	295	71.57	77	37.398	319	10.04	331	35.111	286	39.31	87	52.514	257	40.63	163
36	25.284		72.34		37.717		6.73		35.397		40.18		52.771		42.26	
Mittl. Ort	22.056		57.41		37.868		37.43		32.229		24.87		49.937		23.62	
sec δ, tg δ	1.082		−0.413		1.927		+1.648		1.062		−0.357		1.002		−0.062	
a, *a′*	+3.5		−10.3		+1.2		−10.0		+3.5		−9.9		+3.1		−9.2	
b, *b′*	+0.01		+ 0.86		−0.05		+ 0.87		+0.01		+0.87		0.00		+0.89	

Tag	606) 19 Ursae min. AR.		606) Dekl.		605) ε Ophiuchi AR.		605) Dekl.		604) γ^2 Normae AR.		604) Dekl.		608) τ Herculis AR.		608) Dekl.	
1933	$16^h\ 12^m$		$+76°\ 2'$		$16^h\ 14^m$		$-4°\ 31'$		$16^h\ 14^m$		$-49°\ 59'$		$16^h\ 17^m$		$+46°\ 27'$	
Jan. 1	38.76	59	28.62	309	45.685	275	59.24	160	47.513	408	34.92	56	42.397	291	61.42	315
11	39.35	71	25.53	266	45.960	298	60.84	157	47.921	442	34.36	25	42.688	332	58.27	278
21	40.06	82	22.87	212	46.258	313	62.41	149	48.363	465	34.11	6	43.020	362	55.49	233
31	40.88	90	20.75	152	46.571	320	63.90	134	48.828	477	34.17	37	43.382	383	53.16	178
Feb. 10	41.78	94	19.23	85	46.891	318	65.24	114	49.305	478	34.54	64	43.765	390	51.38	119
20	42.72	94	18.38	18	47.209	313	66.38	91	49.783	470	35.18	89	44.155	389	50.19	55
März 2	43.66	92	18.20	50	47.522	302	67.29	65	50.253	456	36.07	111	44.544	377	49.64	9
12	44.58	86	18.70	115	47.824	287	67.94	39	50.709	436	37.18	129	44.921	356	49.73	72
22	45.44	77	19.85	173	48.111	269	68.33	13	51.145	409	38.47	146	45.277	328	50.45	130
Apr. 1	46.21	67	21.58	224	48.380	248	68.46	12	51.554	380	39.93	159	45.605	295	51.75	181
11	46.88	54	23.82	266	48.628	226	68.34	33	51.934	345	41.52	169	45.900	255	53.56	225
21	47.42	39	26.48	296	48.854	201	68.01	52	52.279	307	43.21	176	46.155	212	55.81	259
Mai 1	47.81	24	29.44	316	49.055	175	67.49	65	52.586	265	44.97	181	46.367	167	58.40	283
11	48.05	9	32.60	325	49.230	147	66.84	76	52.851	220	46.78	182	46.534	118	61.23	298
21	48.14	7	35.85	324	49.377	117	66.08	82	53.071	171	48.60	181	46.652	69	64.21	301
30	48.07	22	39.09	311	49.494	84	65.26	84	53.242	119	50.41	175	46.721	20	67.22	296
Juni 9	47.85	36	42.20	291	49.578	51	64.42	84	53.361	66	52.16	166	46.741	30	70.18	282
19	47.49	50	45.11	262	49.629	18	63.58	82	53.427	12	53.82	153	46.711	78	73.00	260
29	46.99	62	47.73	227	49.647	17	62.76	77	53.439	43	55.35	136	46.633	123	75.60	232
Juli 9	46.37	72	50.00	185	49.630	49	61.99	70	53.396	94	56.71	114	46.510	164	77.92	197
19	45.65	82	51.85	140	49.581	80	61.29	62	53.302	142	57.85	88	46.346	203	79.89	159
29	44.83	88	53.25	91	49.501	106	60.67	54	53.160	183	58.73	60	46.143	234	81.48	116
Aug. 8	43.95	93	54.16	41	49.395	129	60.13	44	52.977	216	59.33	29	45.909	259	82.64	71
18	43.02	96	54.57	11	49.266	144	59.69	34	52.761	238	59.62	4	45.650	276	83.35	24
28	42.06	96	54.46	64	49.122	153	59.35	23	52.523	250	59.58	37	45.374	283	83.59	24
Sept. 7	41.10	95	53.82	114	48.969	152	59.12	12	52.273	246	59.21	70	45.091	282	83.35	72
17	40.15	91	52.68	164	48.817	142	59.00	1	52.027	229	58.51	101	44.809	269	82.63	120
27	39.24	84	51.04	211	48.675	123	59.01	16	51.798	198	57.50	128	44.540	245	81.43	165
Okt. 7	38.40	75	48.93	253	48.552	96	59.17	32	51.600	153	56.22	150	44.295	211	79.78	209
17	37.65	64	46.40	293	48.456	59	59.49	50	51.447	96	54.72	165	44.084	167	77.69	249
27	37.01	51	43.47	324	48.397	16	59.99	68	51.351	31	53.07	174	43.917	114	75.20	285
Nov. 6	36.50	36	40.23	350	48.381	31	60.67	87	51.320	43	51.33	174	43.803	53	72.35	315
16	36.14	20	36.73	366	48.412	81	61.54	106	51.363	118	49.59	168	43.750	10	69.20	336
26	35.94	2	33.07	374	48.493	131	62.60	123	51.481	192	47.91	153	43.760	76	65.84	350
Dez. 6	35.92	16	29.33	370	48.624	178	63.83	138	51.673	263	46.38	133	43.836	141	62.34	355
16	36.08	33	25.63	357	48.802	219	65.21	150	51.936	326	45.05	107	43.977	204	58.79	347
26	36.41	48	22.06	328	49.021	256	66.71	156	52.262	378	43.98	79	44.181	258	55.32	329
36	36.89		18.78		49.277		68.27		52.640		43.19		44.439		52.03	
Mittl. Ort	42.53		49.09		46.427		50.37		48.969		34.81		43.547		79.35	
sec δ, tg δ	4.147		+4.025		1.003		−0.079		1.556		−1.192		1.452		+1.053	
a, *a'*	−1.7		−9.0		+3.2		−8.9		+4.5		−8.9		+1.8		−8.7	
b, *b'*	−0.12		+0.89		0.00		+0.90		+0.04		+0.90		−0.03		+0.90	

Scheinbare Sternörter 1933

Tag	609) γ Herculis AR.		609) γ Herculis Dekl.		615) η Draconis AR.		615) η Draconis Dekl.		611) γ Apodis AR.		611) γ Apodis Dekl.		616) α Scorpii AR.		616) α Scorpii Dekl.	
1933	16h 18m		+19° 18′		16h 23m		+61° 39′		16h 23m		−78° 44′		16h 25m		−26° 17′	
Jan. 1	57.008	262	19.73	253	2.89	34	36.71	326	1.06	109	58.68	182	16.792	302	10.61	50
11	57.270	288	17.20	232	3.23	41	33.45	286	2.15	123	56.86	137	17.094	329	11.11	64
21	57.558	307	14.88	203	3.64	47	30.59	236	3.38	132	55.49	90	17.423	345	11.75	75
31	57.865	317	12.85	167	4.11	50	28.23	178	4.70	139	54.59	41	17.768	355	12.50	82
Feb. 10	58.182	319	11.18	125	4.61	51	26.45	113	6.09	141	54.18	7	18.123	355	13.32	86
20	58.501	315	9.93	78	5.12	52	25.32	46	7.50	141	54.25	55	18.478	351	14.18	86
März 2	58.816	304	9.15	31	5.64	51	24.86	23	8.91	138	54.80	100	18.829	341	15.04	84
12	59.120	290	8.84	16	6.15	48	25.09	89	10.29	133	55.80	142	19.170	327	15.88	79
22	59.410	270	9.00	62	6.63	45	25.98	149	11.62	126	57.22	180	19.497	309	16.67	74
Apr. 1	59.680	247	9.62	102	7.08	39	27.47	204	12.88	116	59.02	214	19.806	288	17.41	67
11	59.927	222	10.64	138	7.47	33	29.51	249	14.04	103	61.16	242	20.094	266	18.08	62
21	60.149	195	12.02	166	7.80	27	32.00	285	15.07	90	63.58	266	20.360	240	18.70	56
Mai 1	60.344	165	13.68	187	8.07	20	34.85	309	15.97	75	66.24	284	20.600	211	19.26	51
11	60.509	134	15.55	201	8.27	12	37.94	323	16.72	58	69.08	296	20.811	181	19.77	47
21	60.643	100	17.56	207	8.39	4	41.17	326	17.30	41	72.04	301	20.992	147	20.24	43
30	60.743	65	19.63	207	8.43	3	44.43	319	17.71	23	75.05	299	21.139	112	20.67	39
Juni 9	60.808	31	21.70	200	8.40	10	47.62	303	17.94	5	78.04	290	21.251	74	21.06	35
19	60.839	5	23.70	187	8.30	17	50.65	278	17.99	14	80.94	275	21.325	34	21.41	31
29	60.834	40	25.57	171	8.13	23	53.43	247	17.85	32	83.69	250	21.359	5	21.72	25
Juli 9	60.794	73	27.28	149	7.90	30	55.90	209	17.53	49	86.19	220	21.354	43	21.97	19
19	60.721	104	28.77	124	7.60	35	57.99	166	17.04	64	88.39	183	21.311	79	22.16	11
29	60.617	131	30.01	97	7.25	39	59.65	119	16.40	76	90.22	139	21.232	111	22.27	1
Aug. 8	60.486	153	30.98	68	6.86	42	60.84	71	15.64	86	91.61	91	21.121	138	22.28	9
18	60.333	169	31.66	37	6.44	45	61.55	19	14.78	93	92.52	39	20.983	157	22.19	19
28	60.164	177	32.03	5	5.99	45	61.74	33	13.85	96	92.91	16	20.826	168	22.00	30
Sept. 7	59.987	177	32.08	28	5.54	45	61.41	84	12.89	94	92.75	70	20.658	170	21.70	40
17	59.810	168	31.80	60	5.09	44	60.57	135	11.95	90	92.05	122	20.488	159	21.30	48
27	59.642	150	31.20	93	4.65	40	59.22	184	11.05	79	90.83	172	20.329	140	20.82	54
Okt. 7	59.492	122	30.27	126	4.25	35	57.38	230	10.26	66	89.11	214	20.189	109	20.28	58
17	59.370	86	29.01	158	3.90	30	55.08	271	9.60	49	86.97	249	20.080	69	19.70	56
27	59.284	44	27.43	187	3.60	23	52.37	308	9.11	29	84.48	276	20.011	22	19.14	52
Nov. 6	59.240	4	25.56	213	3.37	15	49.29	338	8.82	7	81.72	291	19.989	31	18.62	43
16	59.244	54	23.43	235	3.22	6	45.91	360	8.75	16	78.81	295	20.020	87	18.19	30
26	59.298	106	21.08	252	3.16	3	42.31	371	8.91	39	75.86	288	20.107	141	17.89	15
Dez. 6	59.404	155	18.56	262	3.19	12	38.60	375	9.30	61	72.98	271	20.248	194	17.74	2
16	59.559	200	15.94	265	3.31	22	34.85	363	9.91	82	70.27	245	20.442	240	17.76	20
26	59.759	239	13.29	258	3.53	30	31.22	343	10.73	99	67.82	209	20.682	281	17.96	37
36	59.998		10.71		3.83		27.79		11.72		65.73		20.963		18.33	
Mittl. Ort	57.790		33.36		4.76		55.83		6.85		61.18		17.723		5.86	
sec δ, tg δ	1.060		+0.350		2.107		+1.854		5.126		−5.028		1.115		−0.494	
a, a'	+2.6		−8.6		+0.8		−8.2		+9.2		−8.2		+3.7		−8.0	
b, b'	−0.01		+0.90		−0.05		+0.91		+0.14		+0.91		+0.01		+0.92	

Tag	618) β Herculis AR.	Δ	618) β Herculis Dekl.	Δ	619) A Draconis AR.	Δ	619) A Draconis Dekl.	Δ
1933	$16^h\ 27^m$		$+21°\ 37'$		$16^h\ 28^m$		$+68°\ 54'$	
	s		"		s		"	
Jan. 1	19.491	255	49.86	261	3.64	40	28.07	326
11	19.746	284	47.25	240	4.04	49	24.81	287
21	20.030	303	44.85	209	4.53	56	21.94	236
31	20.333	316	42.76	172	5.09	62	19.58	177
Feb. 10	20.649	320	41.04	128	5.71	65	17.81	113
20	20.969	317	39.76	81	6.36	66	16.68	44
März 2	21.286	309	38.95	31	7.02	64	16.24	24
12	21.595	295	38.64	19	7.66	62	16.48	90
22	21.890	276	38.83	66	8.28	56	17.38	152
Apr. 1	22.166	255	39.49	108	8.84	50	18.90	206
11	22.421	229	40.57	145	9.34	42	20.96	252
21	22.650	202	42.02	175	9.76	33	23.48	288
Mai 1	22.852	173	43.77	198	10.09	24	26.36	312
11	23.025	140	45.75	213	10.33	13	29.48	327
21	23.165	106	47.88	220	10.46	4	32.75	330
30*)	[29] 23.271	71	50.08	219	[29] 10.50	7	36.05	323
Juni 9	23.342	35	52.27	213	10.43	17	39.28	306
19	23.377	2	54.40	201	10.26	26	42.34	282
29	23.375	38	56.41	182	10.00	35	45.16	250
Juli 9	23.337	72	58.23	160	9.65	42	47.66	212
19	23.265	105	59.83	135	9.23	49	49.78	168
29	23.160	133	61.18	106	8.74	55	51.46	122
Aug. 8	23.027	157	62.24	75	8.19	59	52.68	72
18	22.870	173	62.99	42	7.60	61	53.40	20
28	22.697	184	63.41	9	6.99	63	53.60	32
Sept. 7	22.513	184	63.50	26	6.36	63	53.28	84
17	22.329	176	63.24	60	5.73	60	52.44	135
27	22.153	160	62.64	95	5.13	56	51.09	185
Okt. 7	21.993	133	61.69	129	4.57	51	49.24	231
17	21.860	97	60.40	162	4.06	43	46.93	272
27	21.763	56	58.78	193	3.63	35	44.21	309
Nov. 6	21.707	7	56.85	220	3.28	25	41.12	339
16	21.700	43	54.65	243	3.03	13	37.73	360
26	21.743	94	52.22	260	2.90	1	34.13	373
Dez. 6	21.837	145	49.62	272	2.89	10	30.40	374
16	21.982	191	46.90	273	2.99	22	26.66	365
26	22.173	231	44.17	267	3.21	34	23.01	344
36	22.404		41.50		3.55		19.57	
Mittl. Ort	20.325		63.73		6.29		47.30	
sec δ, tg δ	1.076		+0.397		2.779		+2.593	
a, *a'*	+2.6		−7.9		−0.1		−7.8	
b, *b'*	−0.01		+0.92		−0.07		+0.92	

Tag	621) σ Herculis AR.	Δ	621) σ Herculis Dekl.	Δ	622) ζ Ophiuchi AR.	Δ	622) ζ Ophiuchi Dekl.	Δ
1933	$16^h\ 31^m$		$+42°\ 33'$		$16^h\ 33^m$		$-10°\ 25'$	
	s		"		s		"	
Jan. 1	55.396	267	70.54	314	27.212	268	66.33	125
11	55.663	307	67.40	282	27.480	293	67.58	126
21	55.970	337	64.58	240	27.773	311	68.84	123
31	56.307	359	62.18	189	28.084	320	70.07	115
Feb. 10	56.666	368	60.29	133	28.404	323	71.22	101
20	57.034	370	58.96	71	28.727	319	72.23	84
März 2	57.404	361	58.25	8	29.046	312	73.07	66
12	57.765	346	58.17	53	29.358	299	73.73	45
22	58.111	322	58.70	112	29.657	284	74.18	23
Apr. 1	58.433	294	59.82	164	29.941	266	74.41	4
11	58.727	260	61.46	208	30.207	246	74.45	13
21	58.987	223	63.54	245	30.453	223	74.32	28
Mai 1	59.210	181	65.99	272	30.676	197	74.04	40
11	59.391	137	68.71	288	30.873	169	73.64	49
21	59.528	92	71.59	295	31.042	139	73.15	53
30*)	[30] 59.620	45	74.54	293	[31] 31.181	106	72.62	57
Juni 9	59.665	1	77.47	282	31.287	72	72.05	57
19	59.664	47	80.29	264	31.359	37	71.48	55
29	59.617	92	82.93	238	31.396	0	70.93	53
Juli 9	59.525	134	85.31	207	31.396	36	70.40	49
19	59.391	172	87.38	171	31.360	68	69.91	45
29	59.219	205	89.09	131	31.292	99	69.46	41
Aug. 8	59.014	232	90.40	89	31.193	124	69.05	36
18	58.782	251	91.29	43	31.069	144	68.69	31
28	58.531	262	91.72	3	30.925	153	68.38	25
Sept. 7	58.269	262	91.69	50	30.772	158	68.13	20
17	58.007	254	91.19	96	30.614	150	67.93	12
27	57.753	234	90.23	142	30.464	133	67.81	4
Okt. 7	57.519	203	88.81	186	30.331	107	67.77	7
17	57.316	164	86.95	227	30.224	72	67.84	19
27	57.152	115	84.68	263	30.152	30	68.03	33
Nov. 6	57.037	59	82.05	294	30.122	17	68.36	48
16	56.978	0	79.11	320	30.139	67	68.84	65
26	56.978	63	75.91	335	30.206	118	69.49	81
Dez. 6	57.041	124	72.56	344	30.324	166	70.30	97
16	57.165	183	69.12	340	30.490	209	71.27	109
26	57.348	236	65.72	326	30.699	247	72.36	119
36	57.584		62.46		30.946		73.55	
Mittl. Ort	56.548		87.33		28.032		58.36	
sec δ, tg δ	1.358		+0.919		1.017		−0.184	
a, *a'*	+1.9		−7.5		+3.3		−7.4	
b, *b'*	−0.02		+0.93		0.00		+0.93	

*) Bei Stern 622) lies Mai 31

Tag	626) η Herculis				625) α Triang. austr.				627) Grb 2377				628) ε Scorpii			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$16^h 40^m$		$+39° 2'$		$16^h 41^m$		$-68° 54'$		$16^h 43^m$		$+56° 53'$		$16^h 45^m$		$-34° 10'$	
Jan. 1	34.780	253	39.58	311	30.07	61	26.68	168	59.669	286	45.94	335	48.035	305	28.01	6
11	35.033	291	36.47	281	30.68	68	25.00	130	59.955	347	42.59	300	48.340	337	27.95	12
21	35.324	322	33.66	242	31.36	74	23.70	91	60.302	395	39.59	255	48.677	359	28.07	29
31	35.646	342	31.24	194	32.10	78	22.79	48	60.697	431	37.04	201	49.036	372	28.36	42
Feb. 10	35.988	353	29.30	140	32.88	80	22.31	6	61.128	453	35.03	139	49.408	378	28.78	54
20	36.341	355	27.90	80	33.68	80	22.25	34	61.581	462	33.64	74	49.786	378	29.32	62
März 2	36.696	349	27.10	20	34.48	79	22.59	72	62.043	458	32.90	6	50.164	370	29.94	69
12	37.045	336	26.90	41	35.27	77	23.31	109	62.501	441	32.84	61	50.534	359	30.63	73
22	37.381	316	27.31	99	36.04	73	24.40	143	62.942	413	33.45	124	50.893	344	31.36	77
Apr. 1	37.697	291	28.30	150	36.77	69	25.83	171	63.355	375	34.69	180	51.237	325	32.13	78
11	37.988	260	29.80	196	37.46	63	27.54	198	63.730	329	36.49	229	51.562	302	32.91	79
21	38.248	227	31.76	232	38.09	56	29.52	221	64.059	276	38.78	268	51.864	277	33.70	81
Mai 1	38.475	188	34.08	260	38.65	49	31.73	237	64.335	219	41.46	298	52.141	248	34.51	81
11	38.663	148	36.68	278	39.14	40	34.10	250	64.554	157	44.44	317	52.389	215	35.32	81
21	38.811	106	39.46	287	39.54	31	36.60	258	64.711	93	47.61	325	52.604	180	36.13	82
31	38.917	62	42.33	287	39.85	22	39.18	259	64.804	27	50.86	324	52.784	140	36.95	81
Juni 9	[2] 38.979	17	45.20	277	[2] 40.07	12	41.77	254	[3] 64.831	38	54.10	312	[3] 52.924	99	37.76	78
19	38.996	27	47.97	262	40.19	2	44.31	243	64.793	101	57.22	293	53.023	54	38.54	73
29	38.969	71	50.59	238	40.21	8	46.74	225	64.692	162	60.15	265	53.077	10	39.27	68
Juli 9	38.898	112	52.97	209	40.13	18	48.99	201	64.530	218	62.80	232	53.087	34	39.95	58
19	38.786	150	55.06	175	39.95	27	51.00	170	64.312	269	65.12	193	53.053	76	40.53	48
29	38.636	183	56.81	138	39.68	35	52.70	134	64.043	312	67.05	149	52.977	114	41.01	35
Aug. 8	38.453	211	58.19	97	39.33	42	54.04	93	63.731	347	68.54	102	52.863	145	41.36	18
18	38.242	232	59.16	53	38.91	46	54.97	49	63.384	374	69.56	52	52.718	170	41.54	2
28	38.010	243	59.69	9	38.45	49	55.46	0	63.010	387	70.08	2	52.548	186	41.56	16
Sept. 7	37.767	247	59.78	36	37.96	49	55.46	48	62.623	391	70.10	49	52.362	191	41.40	34
17	37.520	239	59.42	82	37.47	48	54.98	95	62.232	381	69.61	101	52.171	184	41.06	51
27	37.281	222	58.60	126	36.99	43	54.03	140	61.851	358	68.60	150	51.987	166	40.55	66
Okt. 7	37.059	195	57.34	169	36.56	36	52.63	179	61.493	323	67.10	198	51.821	137	39.89	77
17	36.864	157	55.65	209	36.20	27	50.84	213	61.170	274	65.12	242	51.684	96	39.12	86
27	36.707	111	53.56	247	35.93	17	48.71	238	60.896	216	62.70	282	51.588	47	38.26	89
Nov. 6	36.596	59	51.09	279	35.76	4	46.33	254	60.680	147	59.88	316	51.541	8	37.37	87
16	36.537	1	48.30	304	35.72	8	43.79	259	60.533	71	56.72	342	51.549	67	36.50	81
26	36.536	57	45.26	323	35.80	21	41.20	257	60.462	8	53.30	360	51.616	126	35.69	70
Dez. 6	36.593	116	42.03	333	36.01	33	38.63	242	60.470	90	49.70	368	51.742	183	34.99	55
16	36.709	172	38.70	332	36.34	45	36.21	221	60.560	169	46.02	363	51.925	235	34.44	38
26	36.881	223	35.38	320	36.79	55	34.00	192	60.729	242	42.39	348	52.160	279	34.06	21
36	37.104		32.18		37.34		32.08		60.971		38.91		52.439		33.85	
Mittl. Ort	35.907		55.53		33.08		27.02		61.448		63.42		49.126		23.75	
sec δ, tg δ	1.288		+0.811		2.779		−2.593		1.831		+1.534		1.209		−0.679	
a, *a'*	+2.1		−6.8		+6.3		−6.7		+1.1		−6.5		+3.9		−6.4	
b, *b'*	−0.02		+0.94		+0.06		+0.94		−0.03		+0.95		+0.01		+0.95	

Tag	629) 49 Herculis AR.	Δ	629) 49 Herculis Dekl.	Δ	630) ζ^2 Scorpii AR.	Δ	630) ζ^2 Scorpii Dekl.	Δ	631) ζ Arae AR.	Δ	631) ζ Arae Dekl.	Δ	633) $\varkappa$ Ophiuchi AR.	Δ	633) $\varkappa$ Ophiuchi Dekl.	Δ
1933	$16^h\ 49^m$		$+15°\ 4'$		$16^h\ 49^m$		$-42°\ 14'$		$16^h\ 53^m$		$-55°\ 53'$		$16^h\ 54^m$		$+9°\ 28'$	
Jan. 1	0.896	237	54.59	236	50.438	332	57.59	52	2.243	409	13.25	124	28.871	234	28.75	212
11	1.133	267	52.23	222	50.770	367	57.07	29	2.652	458	12.01	93	29.105	263	26.63	200
21	1.400	288	50.01	197	51.137	393	56.78	7	3.110	495	11.08	62	29.368	284	24.63	182
31	1.688	302	48.04	167	51.530	411	56.71	14	3.605	520	10.46	31	29.652	299	22.81	155
Feb. 10	1.990	310	46.37	130	51.941	417	56.85	33	4.125	533	10.15	1	29.951	306	21.26	124
20	2.300	311	45.07	88	52.358	418	57.18	51	4.658	536	10.16	30	30.257	307	20.02	87
März 2	2.611	305	44.19	43	52.776	412	57.69	65	5.194	530	10.46	58	30.564	303	19.15	47
12	2.916	296	43.76	1	53.188	401	58.34	77	5.724	517	11.04	84	30.867	294	18.68	8
22	3.212	282	43.77	44	53.589	384	59.11	89	6.241	496	11.88	108	31.161	282	18.60	30
Apr. 1	3.494	264	44.21	84	53.973	363	60.00	98	6.737	470	12.96	129	31.443	266	18.90	67
11	3.758	244	45.05	119	54.336	339	60.98	106	7.207	437	14.25	148	31.709	246	19.57	99
21	4.002	220	46.24	148	54.675	311	62.04	113	7.644	399	15.73	164	31.955	225	20.56	126
Mai 1	4.222	193	47.72	171	54.986	278	63.17	119	8.043	355	17.37	178	32.180	199	21.82	147
11	4.415	165	49.43	187	55.264	242	64.36	123	8.398	305	19.15	187	32.379	172	23.29	161
21	4.580	132	51.30	196	55.506	201	65.59	125	8.703	251	21.02	194	32.551	141	24.90	169
31	4.712	98	53.26	198	55.707	157	66.84	125	8.954	190	22.96	196	32.692	108	26.59	172
Juni 9	[4] 4.810	63	55.24	194	[4] 55.864	110	68.09	123	[5] 9.144	127	24.92	194	[5] 32.800	73	28.31	170
19	4.873	26	57.18	185	55.974	61	69.32	118	9.271	62	26.86	187	32.873	37	30.01	162
29	4.899	10	59.03	170	56.035	10	70.50	108	9.333	4	28.73	174	32.910	0	31.63	150
Juli 9	4.889	47	60.73	153	56.045	39	71.58	97	9.329	70	30.47	157	32.910	36	33.13	135
19	4.842	81	62.26	132	56.006	86	72.55	82	9.259	131	32.04	135	32.874	71	34.48	118
29	4.761	112	63.58	108	55.920	128	73.37	62	9.128	186	33.39	107	32.803	102	35.66	97
Aug. 8	4.649	138	64.66	82	55.792	165	73.99	41	8.942	234	34.46	76	32.701	129	36.63	76
18	4.511	158	65.48	54	55.627	193	74.40	17	8.708	269	35.22	41	32.572	150	37.39	53
28	4.353	172	66.02	26	55.434	211	74.57	9	8.439	292	35.63	4	32.422	165	37.92	28
Sept. 7	4.181	176	66.28	4	55.223	216	74.48	34	8.147	300	35.67	35	32.257	169	38.20	3
17	4.005	172	66.24	34	55.007	210	74.14	60	7.847	291	35.32	72	32.088	167	38.23	22
27	3.833	159	65.90	65	54.797	190	73.54	82	7.556	267	34.60	107	31.921	154	38.01	48
Okt. 7	3.674	135	65.25	95	54.607	158	72.72	102	7.289	224	33.53	139	31.767	131	37.53	74
17	3.539	103	64.30	124	54.449	114	71.70	117	7.065	169	32.14	165	31.636	100	36.79	100
27	3.436	65	63.06	153	54.335	60	70.53	127	6.896	100	30.49	185	31.536	62	35.79	126
Nov. 6	3.371	19	61.53	180	54.275	1	69.26	130	6.796	22	28.64	197	31.474	18	34.53	150
16	3.352	30	59.73	202	54.276	65	67.96	128	6.774	60	26.67	201	31.456	29	33.03	172
26	3.382	79	57.71	222	54.341	131	66.68	119	6.834	146	24.66	196	31.485	79	31.31	191
Dez. 6	3.461	128	55.49	234	54.472	194	65.49	106	6.980	228	22.70	185	31.564	127	29.40	204
16	3.589	173	53.15	241	54.666	252	64.43	89	7.208	303	20.85	167	31.691	171	27.36	212
26	3.762	213	50.74	239	54.918	303	63.54	68	7.511	372	19.18	143	31.862	211	25.24	212
36	3.975		48.35		55.221		62.86		7.883		17.75		32.073		23.12	
Mittl. Ort	1.773		66.94		51.710		54.31		4.046		11.48		29.739		40.17	
sec δ, tg δ	1.036		+0.270		1.351		−0.908		1.783		−1.476		1.014		+0.167	
a, a'	+2.7		−6.1		+4.2		−6.0		+5.0		−5.8		+2.9		−5.7	
b, b'	−0.01		+0.95		+0.02		+0.95		+0.03		+0.96		0.00		+0.96	

Scheinbare Sternörter 1933

Tag	634) ε Herculis AR.		634) ε Herculis Dekl.		637) η Ophiuchi AR.		637) η Ophiuchi Dekl.	
1933	$16^h 57^m$		+31° 0′		$17^h 6^m$		−15° 38′	
	s		″		s		″	
Jan. 1	42.460	229	71.97	292	31.076	249	44.56	81
11	42.689	265	69.05	270	31.325	278	45.37	85
21	42.954	294	66.35	236	31.603	301	46.22	86
31	43.248	314	63.99	196	31.904	315	47.08	82
Feb. 10	43.562	326	62.03	147	32.219	323	47.90	74
20	43.888	330	60.56	94	32.542	325	48.64	63
März 2	44.218	328	59.62	37	32.867	322	49.27	49
12	44.546	318	59.25	19	33.189	316	49.76	35
22	44.864	305	59.44	74	33.505	306	50.11	19
Apr. 1	45.169	284	60.18	123	33.811	291	50.30	5
11	45.453	261	61.41	168	34.102	275	50.35	9
21	45.714	233	63.09	205	34.377	255	50.26	19
Mai 1	45.947	202	65.14	232	34.632	232	50.07	27
11	46.149	168	67.46	253	34.864	205	49.80	33
21	46.317	130	69.99	265	35.069	176	49.47	36
31	46.447	91	72.64	266	35.245	142	49.11	37
Juni 9*)	[6] 46.538	50	75.30	262	[3] 35.387	106	48.74	36
19	46.588	9	77.92	249	35.493	69	48.38	34
29	46.597	33	80.41	231	35.562	29	48.04	32
Juli 9	46.564	73	82.72	206	35.591	10	47.72	28
19	46.491	111	84.78	177	35.581	48	47.44	26
29	46.380	144	86.55	144	35.533	83	47.18	23
Aug. 8	46.236	174	87.99	109	35.450	114	46.95	22
18	46.062	196	89.08	70	35.336	138	46.73	20
28	45.866	211	89.78	30	35.198	156	46.53	19
Sept. 7	45.655	217	90.08	10	35.042	163	46.34	18
17	45.438	213	89.98	52	34.879	162	46.16	17
27	45.225	201	89.46	94	34.717	150	45.99	14
Okt. 7	45.024	176	88.52	134	34.567	128	45.85	10
17	44.848	145	87.18	172	34.439	96	45.75	4
27	44.703	103	85.46	208	34.343	57	45.71	5
Nov. 6	44.600	57	83.38	240	34.286	10	45.76	15
16	44.543	4	80.98	268	34.276	38	45.91	26
26	44.539	50	78.30	288	34.314	89	46.17	39
Dez. 6	44.589	103	75.42	302	34.403	139	46.56	52
16	44.692	155	72.40	305	34.542	185	47.08	64
26	44.847	202	69.35	299	34.727	226	47.72	73
36	45.049		66.36		34.953		48.45	
Mittl. Ort	43.530		86.21		31.996		36.83	
sec δ, tg δ	1.167		+0.602		1.039		−0.280	
a, a'	+2.3		−5.4		+3.4		−4.6	
b, b'	−0.01		+0.96		0.00		+0.97	

Tag	639) ζ Draconis AR.		639) ζ Draconis Dekl.		640) α Herculis AR.		640) α Herculis Dekl.	
1933	$17^h 8^m$		+65° 47′		$17^h 11^m$		+14° 27′	
	s		″		s		″	
Jan. 1	32.55	28	33.19	346	34.538	217	43.40	231
11	32.83	37	29.73	316	34.755	249	41.09	218
21	33.20	45	26.57	274	35.004	274	38.91	197
31	33.65	50	23.83	221	35.278	291	36.94	168
Feb. 10	34.15	55	21.62	162	35.569	302	35.26	132
20	34.70	58	20.00	97	35.871	307	33.94	92
März 2	35.28	58	19.03	28	36.178	306	33.02	48
12	35.86	57	18.75	39	36.484	300	32.54	5
22	36.43	54	19.14	105	36.784	290	32.49	39
Apr. 1	36.97	50	20.19	165	37.074	276	32.88	80
11	37.47	45	21.84	218	37.350	258	33.68	116
21	37.92	38	24.02	262	37.608	237	34.84	147
Mai 1	38.30	30	26.64	297	37.845	212	36.31	169
11	38.60	22	29.61	320	38.057	185	38.00	188
21	38.82	13	32.81	333	38.242	154	39.88	198
31	38.95	4	36.14	336	38.396	120	41.86	202
Juni 9*)	[9] 38.99	4	39.50	330	38.516	84	43.88	200
19	38.95	13	42.80	313	[10] 38.600	47	45.88	192
29	38.82	22	45.93	290	38.647	8	47.80	179
Juli 9	38.60	30	48.83	258	38.655	30	49.59	162
19	38.30	37	51.41	222	38.625	66	51.21	142
29	37.93	43	53.63	179	38.559	100	52.63	119
Aug. 8	37.50	48	55.42	134	38.459	129	53.82	94
18	37.02	52	56.76	84	38.330	153	54.76	66
28	36.50	54	57.60	33	38.177	170	55.42	38
Sept. 7	35.96	56	57.93	19	38.007	178	55.80	10
17	35.40	55	57.74	72	37.829	177	55.90	20
27	34.85	53	57.02	124	37.652	166	55.70	51
Okt. 7	34.32	49	55.78	173	37.486	147	55.19	81
17	33.83	44	54.05	221	37.339	118	54.38	110
27	33.39	37	51.84	264	37.221	82	53.28	139
Nov. 6	33.02	29	49.20	302	37.139	38	51.89	166
16	32.73	20	46.18	333	37.101	9	50.23	190
26	32.53	9	42.85	354	37.110	57	48.33	210
Dez. 6	32.44	1	39.31	367	37.167	105	46.23	224
16	32.45	12	35.64	368	37.272	152	43.99	232
26	32.57	22	31.96	356	37.424	193	41.67	232
36	32.79		28.40		37.617		39.35	
Mittl. Ort	35.33		49.40		35.483		55.18	
sec δ, tg δ	2.439		+2.225		1.033		+0.258	
a, a'	+0.2		−4.5		+2.7		−4.2	
b, b'	−0.03		+0.97		0.00		+0.98	

*) Bei Stern 640) lies Juni 10

Tag	641) δ Herculis AR.	Δ	641) δ Herculis Dekl.	Δ	643) π Herculis AR.	Δ	643) π Herculis Dekl.	Δ	644) ϑ Ophiuchi AR.	Δ	644) ϑ Ophiuchi Dekl.	Δ	645) β Arae AR.	Δ	645) β Arae Dekl.	Δ
1933	$17^h 12^m$		$+24° 54'$		$17^h 12^m$		$+36° 52'$		$17^h 17^m$		$-24° 56'$		$17^h 19^m$		$-55° 28'$	
Jan. 1	15.688	215	48.36	273	41.522	216	46.99	310	52.523	255	10.44	22	41.707	369	11.53	146
11	15.903	249	45.63	256	41.738	257	43.89	287	52.778	287	10.66	32	42.076	423	10.07	121
21	16.152	277	43.07	227	41.995	290	41.02	254	53.065	312	10.98	39	42.499	465	8.86	94
31	16.429	297	40.80	192	42.285	316	38.48	211	53.377	329	11.37	43	42.964	496	7.92	65
Feb. 10	16.726	310	38.88	148	42.601	333	36.37	161	53.706	340	11.80	43	43.460	516	7.27	36
20	17.036	317	37.40	99	42.934	342	34.76	105	54.046	343	12.23	43	43.976	526	6.91	8
März 2	17.353	317	36.41	48	43.276	343	33.71	45	54.389	343	12.66	39	44.502	528	6.83	20
12	17.670	310	35.93	4	43.619	337	33.26	15	54.732	338	13.05	34	45.030	521	7.03	46
22	17.980	299	35.97	56	43.956	325	33.41	74	55.070	329	13.39	29	45.551	508	7.49	70
Apr. 1	18.279	285	36.53	103	44.281	305	34.15	127	55.399	316	13.68	23	46.059	487	8.19	93
11	18.564	264	37.56	146	44.586	282	35.42	175	55.715	300	13.91	18	46.546	461	9.12	115
21	18.828	240	39.02	182	44.868	254	37.17	216	56.015	281	14.09	15	47.007	428	10.27	134
Mai 1	19.068	214	40.84	210	45.122	220	39.33	249	56.296	257	14.24	13	47.435	388	11.61	150
11	19.282	182	42.94	230	45.342	184	41.82	271	56.553	230	14.37	12	47.823	343	13.11	165
21	19.464	148	45.24	243	45.526	144	44.53	285	56.783	198	14.49	13	48.166	290	14.76	176
31	19.612	112	47.67	248	45.670	101	47.38	290	56.981	164	14.62	14	48.456	233	16.52	183
Juni 10	19.724	74	50.15	245	45.771	57	50.28	287	57.145	126	14.76	16	48.689	170	18.35	186
19	19.798	33	52.60	234	45.828	11	53.15	275	57.271	85	14.92	17	48.859	105	20.21	185
29	19.831	8	54.94	220	45.839	34	55.90	256	57.356	42	15.09	18	48.964	37	22.06	177
Juli 9	19.823	47	57.14	198	45.805	78	58.46	232	57.398	0	15.27	17	49.001	31	23.83	166
19	19.776	85	59.12	173	45.727	119	60.78	201	57.398	42	15.44	16	48.970	97	25.49	149
29	19.691	120	60.85	144	45.608	157	62.79	167	57.356	81	15.60	13	48.873	156	26.98	125
Aug. 8	19.571	150	62.29	112	45.451	190	64.46	129	57.275	115	15.73	7	48.717	209	28.23	98
18	19.421	174	63.41	78	45.261	215	65.75	88	57.160	143	15.80	1	48.508	252	29.21	66
28	19.247	192	64.19	43	45.046	233	66.63	45	57.017	163	15.81	6	48.256	282	29.87	31
Sept. 7	19.055	199	64.62	5	44.813	242	67.08	1	56.854	174	15.75	15	47.974	298	30.18	7
17	18.856	199	64.67	33	44.571	240	67.09	44	56.680	173	15.60	23	47.676	297	30.11	44
27	18.657	189	64.34	70	44.331	230	66.65	88	56.507	163	15.37	30	47.379	281	29.67	81
Okt. 7	18.468	168	63.64	107	44.101	208	65.77	132	56.344	141	15.07	35	47.098	247	28.86	115
17	18.300	139	62.57	144	43.893	175	64.45	175	56.203	109	14.72	38	46.851	197	27.71	145
27	18.161	100	61.13	178	43.718	136	62.70	213	56.094	69	14.34	39	46.654	136	26.26	168
Nov. 6	18.061	57	59.35	209	43.582	87	60.57	249	56.025	21	13.95	35	46.518	62	24.58	186
16	18.004	8	57.26	237	43.495	34	58.08	279	56.004	31	13.60	30	46.456	17	22.72	197
26	17.996	43	54.89	258	43.461	21	55.29	302	56.035	85	13.30	21	46.473	99	20.75	198
Dez. 6	18.039	94	52.31	272	43.482	79	52.27	317	56.120	137	13.09	10	46.572	182	18.77	192
16	18.133	143	49.59	280	43.561	134	49.10	322	56.257	185	12.99	2	46.754	260	16.85	181
26	18.276	188	46.79	277	43.695	185	45.88	317	56.442	230	13.01	13	47.014	327	15.04	162
36	18.464		44.02		43.880		42.71		56.672		13.14		47.341		13.42	
Mittl. Ort	16.733		61.32		42.769		61.12		53.532		3.65		43.501		7.98	
sec δ, tg δ	1.103		+0.465		1.250		+0.750		1.103		−0.465		1.764		−1.453	
a, a'	+2.5		−4.1		+2.1		−4.1		+3.7		−3.7		+5.0		−3.5	
b, b'	−0.01		+0.98		−0.01		+0.98		+0.01		+0.98		+0.02		+0.98	

Tag	648) δ Arae AR.		648) δ Arae Dekl.		651) α Arae AR.		651) α Arae Dekl.	
1933	17h 25m		−60° 37′		17h 26m		−49° 49′	
Jan. 1	0.60	40	52.44	176	37.964	325	35.65	123
11	1.00	48	50.68	149	38.289	374	34.42	102
21	1.48	52	49.19	120	38.663	410	33.40	78
31	2.00	56	47.99	88	39.073	438	32.62	55
Feb. 10	2.56	58	47.11	56	39.511	457	32.07	32
20	3.14	60	46.55	24	39.968	467	31.75	8
März 2	3.74	60	46.31	8	40.435	469	31.67	14
12	4.34	59	46.39	39	40.904	464	31.81	35
22	4.93	58	46.78	69	41.368	454	32.16	54
Apr. 1	5.51	56	47.47	96	41.822	438	32.70	73
11	6.07	53	48.43	121	42.260	417	33.43	91
21	6.60	50	49.64	144	42.677	389	34.34	106
Mai 1	7.10	44	51.08	165	43.066	356	35.40	121
11	7.54	39	52.73	183	43.422	318	36.61	133
21	7.93	34	54.56	196	43.740	273	37.94	144
31	8.27	27	56.52	206	44.013	223	39.38	151
Juni 10	8.54	19	58.58	210	44.236	169	40.89	155
19	[13]8.73	12	60.68	209	[13]44.405	111	42.44	156
29	8.85	3	62.77	203	44.516	51	44.00	151
Juli 9	8.88	4	64.80	189	44.567	10	45.51	142
19	8.84	11	66.69	172	44.557	68	46.93	129
29	8.73	18	68.41	146	44.489	123	48.22	110
Aug. 8	8.55	25	69.87	116	44.366	171	49.32	87
18	8.30	30	71.03	82	44.195	212	50.19	61
28	8.00	33	71.85	43	43.983	239	50.80	31
Sept. 7	7.67	35	72.28	1	43.744	256	51.11	2
17	7.32	36	72.29	40	43.488	258	51.09	34
27	6.96	33	71.89	82	43.230	245	50.75	66
Okt. 7	6.63	30	71.07	121	42.985	216	50.09	96
17	6.33	25	69.86	156	42.769	174	49.13	122
27	6.08	17	68.30	183	42.595	121	47.91	143
Nov. 6	5.91	9	66.47	206	42.474	56	46.48	158
16	5.82	0	64.41	218	42.418	13	44.90	167
26	5.82	9	62.23	224	42.431	87	43.23	168
Dez. 6	5.91	18	59.99	221	42.518	158	41.55	164
16	6.09	28	57.78	209	42.676	227	39.91	152
26	6.37	36	55.69	192	42.903	289	38.39	138
36	6.73		53.77		43.192		37.01	
Mittl. Ort	2.73		48.96		39.502		31.15	
sec δ, tg δ	2.039		−1.777		1.550		−1.184	
a, *a′*	+5.4		−3.0		+4.6		−2.9	
b, *b′*	+0.02		+0.99		+0.01		+0.99	

Tag	653) β Draconis AR.		653) β Draconis Dekl.		652) λ Scorpii AR.		652) λ Scorpii Dekl.	
1933	17h 28m		+52° 20′		17h 29m		−37° 3′	
Jan. 1	53.211	206	46.81	343	2.137	273	30.16	54
11	53.417	266	43.38	320	2.410	311	29.62	40
21	53.683	317	40.18	283	2.721	343	29.22	26
31	54.000	357	37.35	238	3.064	361	28.96	12
Feb. 10	54.357	389	34.97	182	3.425	377	28.84	1
20	54.746	408	33.15	122	3.802	385	28.85	11
März 2	55.154	417	31.93	56	4.187	386	28.96	21
12	55.571	414	31.37	10	4.573	383	29.17	28
22	55.985	402	31.47	75	4.956	375	29.45	36
Apr. 1	56.387	380	32.22	135	5.331	362	29.81	43
11	56.767	350	33.57	190	5.693	346	30.24	49
21	57.117	313	35.47	237	6.039	325	30.73	55
Mai 1	57.430	267	37.84	275	6.364	299	31.28	63
11	57.697	218	40.59	302	6.663	269	31.91	69
21	57.915	164	43.61	321	6.932	235	32.60	74
31	58.079	106	46.82	328	7.167	195	33.34	80
Juni 10	58.185	47	50.10	327	7.362	151	34.14	83
19	[14]58.232	14	53.37	316	[14]7.513	104	34.97	85
29	58.218	74	56.53	298	7.617	56	35.82	84
Juli 9	58.144	131	59.51	272	7.673	6	36.66	80
19	58.013	184	62.23	239	7.679	42	37.46	74
29	57.829	234	64.62	202	7.637	87	38.20	63
Aug. 8	57.595	275	66.64	160	7.550	128	38.83	49
18	57.320	309	68.24	114	7.422	161	39.32	34
28	57.011	334	69.38	66	7.261	185	39.66	15
Sept. 7	56.677	347	70.04	16	7.076	200	39.81	5
17	56.330	349	70.20	35	6.876	202	39.76	26
27	55.981	338	69.85	86	6.674	192	39.50	45
Okt. 7	55.643	316	68.99	135	6.482	169	39.05	63
17	55.327	281	67.64	184	6.313	135	38.42	78
27	55.046	235	65.80	229	6.178	91	37.64	90
Nov. 6	54.811	179	63.51	269	6.087	38	36.74	96
16	54.632	116	60.82	303	6.049	19	35.78	99
26	54.516	47	57.79	330	6.068	78	34.79	95
Dez. 6	54.469	25	54.49	348	6.146	137	33.84	90
16	54.494	96	51.01	354	6.283	194	32.94	78
26	54.590	165	47.47	350	6.477	243	32.16	66
36	54.755		43.97		6.720		31.50	
Mittl. Ort	55.077		60.95		3.327		24.30	
sec δ, tg δ	1.637		+1.296		1.253		−0.755	
a, *a′*	+1.4		−2.7		+4.1		−2.7	
b, *b′*	−0.01		+0.99		+0.01		+0.99	

Tag	656) α Ophiuchi AR.		656) α Ophiuchi Dekl.		654) ϑ Scorpii AR.		654) ϑ Scorpii Dekl.		658) ξ Serpentis AR.		658) ξ Serpentis Dekl.		664) ω Draconis AR.		664) ω Draconis Dekl.	
1933	17h 31m		+12° 36′		17h 32m		−42° 57′		17h 33m		−15° 21′		17h 37m		+68° 46′	
Jan. 1	48.411	201	15.51	220	28.722	289	31.67	90	43.949	224	37.14	69	16.92	22	66.85	353
11	48.612	233	13.31	210	29.011	331	30.77	74	44.173	256	37.83	72	17.14	34	63.32	329
21	48.845	260	11.21	190	29.342	364	30.03	55	44.429	282	38.55	72	17.48	43	60.03	293
31	49.105	280	9.31	165	29.706	389	29.48	37	44.711	300	39.27	67	17.91	51	57.10	246
Feb. 10	49.385	294	7.66	131	30.095	406	29.11	20	45.011	312	39.94	59	18.42	57	54.64	191
20	49.679	301	6.35	94	30.501	415	28.91	4	45.323	319	40.53	48	18.99	62	52.73	129
März 2	49.980	304	5.41	52	30.916	418	28.87	12	45.642	321	41.01	33	19.61	64	51.44	61
12	50.284	301	4.89	10	31.334	414	28.99	26	45.963	319	41.34	18	20.25	64	50.83	6
22	50.585	295	4.79	33	31.748	407	29.25	39	46.282	312	41.52	4	20.89	63	50.89	73
Apr. 1	50.880	284	5.12	72	32.155	394	29.64	51	46.594	303	41.56	11	21.52	59	51.62	137
11	51.164	270	5.84	108	32.549	376	30.15	63	46.897	289	41.45	25	22.11	54	52.99	193
21	51.434	251	6.92	139	32.925	354	30.78	75	47.186	273	41.20	34	22.65	47	54.92	242
Mai 1	51.685	228	8.31	164	33.279	326	31.53	86	47.459	253	40.86	42	23.12	39	57.34	282
11	51.913	203	9.95	181	33.605	293	32.39	96	47.712	228	40.44	47	23.51	30	60.16	312
21	52.116	174	11.76	194	33.898	255	33.35	104	47.940	199	39.97	49	23.81	21	63.28	332
31	52.290	141	13.70	198	34.153	211	34.39	111	48.139	168	39.48	48	24.02	10	66.60	341
Juni 10	52.431	105	15.68	197	34.364	165	35.50	116	48.307	132	39.00	46	24.12	0	70.01	341
19	[15] 52.536	67	17.65	191	[15] 34.529	113	36.66	117	[15] 48.439	93	38.54	42	[16] 24.12	10	73.42	331
29	52.603	28	19.56	179	34.642	60	37.83	116	48.532	53	38.12	37	24.02	20	76.73	313
Juli 9	52.631	11	21.35	164	34.702	6	38.99	110	48.585	12	37.75	32	23.82	30	79.86	287
19	52.620	50	22.99	145	34.708	47	40.09	101	48.597	29	37.43	27	23.52	38	82.73	254
29	52.570	86	24.44	123	34.661	97	41.10	87	48.568	67	37.16	23	23.14	46	85.27	217
Aug. 8	52.484	117	25.67	99	34.564	140	41.97	70	48.501	101	36.93	19	22.68	53	87.44	173
18	52.367	144	26.66	74	34.424	178	42.67	50	48.400	130	36.74	16	22.15	58	89.17	127
28	52.223	163	27.40	47	34.246	204	43.17	26	48.270	151	36.58	13	21.57	62	90.44	77
Sept. 7	52.060	175	27.87	20	34.042	221	43.43	0	48.119	163	36.45	12	20.95	65	91.21	26
17	51.885	177	28.07	9	33.821	223	43.43	26	47.956	167	36.33	10	20.30	65	91.47	27
27	51.708	170	27.98	37	33.598	213	43.17	51	47.789	158	36.23	8	19.65	63	91.20	80
Okt. 7	51.538	154	27.61	66	33.385	190	42.66	75	47.631	142	36.15	5	19.02	60	90.40	131
17	51.384	127	26.95	95	33.195	153	41.91	97	47.489	113	36.10	0	18.42	55	89.09	182
27	51.257	93	26.00	122	33.042	106	40.94	112	47.376	78	36.10	7	17.87	49	87.27	229
Nov. 6	51.164	53	24.78	149	32.936	50	39.82	125	47.298	34	36.17	15	17.38	41	84.98	271
16	51.111	7	23.29	173	32.886	12	38.57	130	47.264	13	36.32	24	16.97	30	82.27	307
26	51.104	40	21.56	192	32.898	76	37.27	130	47.277	62	36.56	34	16.67	20	79.20	335
Dez. 6	51.144	88	19.64	209	32.974	141	35.97	126	47.339	111	36.90	46	16.47	8	75.85	355
16	51.232	133	17.55	217	33.115	201	34.71	116	47.450	158	37.36	55	16.39	3	72.30	362
26	51.365	175	15.38	220	33.316	256	33.55	102	47.608	199	37.91	63	16.42	16	68.68	359
36	51.540		13.18		33.572		32.53		47.807		38.54		16.58		65.09	
Mittl. Ort	49.396		26.60		30.044		26.22		44.905		28.88		20.45		80.75	
sec δ, tg δ	1.025		+0.224		1.366		−0.931		1.037		−0.275		2.764		+2.577	
a, *a′*	+2.8		−2.5		+4.3		−2.4		+3.4		−2.3		−0.4		−2.0	
b, *b′*	0.00		+0.99		+0.01		+0.99		0.00		+0.99		−0.02		+1.00	

Scheinbare Sternörter 1933

Tag	663) ι Herculis				661) η Pavonis				665) β Ophiuchi				670) ψ Draconis			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	17h 37m		+46° 1′		17h 39m		−64° 41′		17h 40m		+4° 35′		17h 43m		+72° 10′	
Jan. 1	32.733	189	74.40	334	6.63	42	43.44	206	8.749	197	27.41	178	3.20	22	42.62	354
11	32.922	241	71.06	313	7.05	50	41.38	181	8.946	231	25.63	170	3.42	35	39.08	332
21	33.163	286	67.93	280	7.55	56	39.57	153	9.177	256	23.93	157	3.77	48	35.76	297
31	33.449	323	65.13	238	8.11	61	38.04	120	9.433	276	22.36	137	4.25	57	32.79	252
Feb. 10	33.772	349	62.75	186	8.72	65	36.84	86	9.709	290	20.99	111	4.82	65	30.27	197
20	34.121	368	60.89	127	9.37	67	35.98	52	9.999	298	19.88	81	5.47	71	28.30	135
März 2	34.489	376	59.62	65	10.04	68	35.46	17	10.297	302	19.07	46	6.18	74	26.95	70
12	34.865	376	58.97	1	10.72	68	35.29	17	10.599	301	18.61	11	6.92	75	26.25	2
22	35.241	368	58.96	63	11.40	67	35.46	50	10.900	295	18.50	24	7.67	73	26.23	65
Apr. 1	35.609	351	59.59	122	12.07	64	35.96	82	11.195	286	18.74	57	8.40	69	26.88	128
11	35.960	327	60.81	176	12.71	62	36.78	111	11.481	275	19.31	87	9.09	63	28.16	186
21	36.287	297	62.57	223	13.33	57	37.89	139	11.756	258	20.18	113	9.72	55	30.02	235
Mai 1	36.584	261	64.80	261	13.90	53	39.28	164	12.014	237	21.31	133	10.27	46	32.37	276
11	36.845	219	67.41	289	14.43	46	40.92	185	12.251	213	22.64	148	10.73	35	35.13	308
21	37.064	173	70.30	309	14.89	40	42.77	203	12.464	186	24.12	158	11.08	23	38.21	328
31	37.237	123	73.39	318	15.29	32	44.80	216	12.650	155	25.70	162	11.31	12	41.49	338
Juni 10	37.360	71	76.57	318	15.61	24	46.96	224	12.805	119	27.32	161	11.43	1	44.87	340
19	37.431	18	79.75	310	15.85	15	49.20	226	12.924	82	28.93	155	11.42	13	48.27	331
29	37.449	35	82.85	293	16.00	6	51.46	222	13.006	44	30.48	145	11.29	24	51.58	314
Juli 9	37.414	88	85.78	270	16.06	3	53.68	210	13.050	4	31.93	133	11.05	36	54.72	289
19	37.326	137	88.48	240	16.03	12	55.78	194	13.054	35	33.26	118	10.69	47	57.61	258
29	37.189	184	90.88	204	15.91	20	57.72	169	13.019	72	34.44	101	10.22	55	60.19	221
Aug. 8	37.005	222	92.92	165	15.71	27	59.41	140	12.947	104	35.45	82	9.67	63	62.40	178
18	36.783	256	94.57	122	15.44	34	60.81	103	12.843	132	36.27	62	9.04	70	64.18	133
28	36.527	279	95.79	76	15.10	38	61.84	64	12.711	153	36.89	43	8.34	75	65.51	83
Sept. 7	36.248	294	96.55	29	14.72	41	62.48	20	12.558	165	37.32	22	7.59	77	66.34	33
17	35.954	298	96.84	21	14.31	42	62.68	26	12.393	170	37.54	0	6.82	78	66.67	20
27	35.656	290	96.63	70	13.89	40	62.42	71	12.223	163	37.54	21	6.04	77	66.47	73
Okt. 7	35.366	271	95.93	118	13.49	36	61.71	114	12.060	148	37.33	44	5.27	73	65.74	124
17	35.095	240	94.75	165	13.13	31	60.57	153	11.912	123	36.89	65	4.54	68	64.50	175
27	34.855	200	93.10	210	12.82	23	59.04	188	11.789	90	36.24	88	3.86	61	62.75	222
Nov. 6	34.655	151	91.00	250	12.59	15	57.16	213	11.699	50	35.36	109	3.25	51	60.53	265
16	34.504	95	88.50	285	12.44	4	55.03	233	11.649	6	34.27	129	2.74	40	57.88	303
26	34.409	34	85.65	312	12.40	6	52.70	243	11.643	41	32.98	147	2.34	27	54.85	331
Dez. 6	34.375	29	82.53	332	12.46	17	50.27	244	11.684	87	31.51	161	2.07	14	51.54	352
16	34.404	92	79.21	341	12.63	27	47.83	236	11.771	132	29.90	172	1.93	0	48.02	361
26	34.496	154	75.80	339	12.90	36	45.47	221	11.903	173	28.18	175	1.93	14	44.41	359
36	34.650		72.41		13.26		43.26		12.076		26.43		2.07		40.82	
Mittl. Ort	34.364		87.64		9.10		39.28		9.707		37.60		7.52		56.03	
sec δ, tg δ	1.441		+1.037		2.340		−2.115		1.003		+0.080		3.268		+3.111	
a, a'	+1.7		−2.0		+5.9		−1.8		+3.0		−1.7		−1.1		−1.5	
b, b'	−0.01		+1.00		+0.01		+1.00		0.00		+1.00		−0.02		+1.00	

Tag	667) μ Herculis AR.		667) μ Herculis Dekl.		671) ξ Draconis AR.		671) ξ Draconis Dekl.	
1933	17h 43m		+27° 45′		17h 52m		+56° 52′	
Jan. 1	48.912	181	19.45	284	19.911	173	44.98	351
11	49.093	220	16.61	268	20.084	243	41.47	333
21	49.313	253	13.93	244	20.327	305	38.14	300
31	49.566	279	11.49	209	20.632	358	35.14	257
Feb. 10	49.845	298	9.40	166	20.990	401	32.57	205
20	50.143	311	7.74	118	21.391	430	30.52	145
März 2	50.454	317	6.56	66	21.821	449	29.07	81
12	50.771	317	5.90	11	22.270	454	28.26	14
22	51.088	312	5.79	43	22.724	447	28.12	53
Apr. 1	51.400	302	6.22	94	23.171	431	28.65	116
11	51.702	285	7.16	140	23.602	402	29.81	174
21	51.987	266	8.56	181	24.004	364	31.55	225
Mai 1	52.253	240	10.37	214	24.368	317	33.80	268
11	52.493	212	12.51	238	24.685	264	36.48	300
21	52.705	178	14.89	255	24.949	205	39.48	323
31	52.883	141	17.44	264	25.154	140	42.71	336
Juni 10	53.024	101	20.08	265	25.294	73	46.07	339
19*)	53.125	59	22.73	258	25.367	5	49.46	334
29	53.184	16	25.31	244	25.372	63	52.80	318
Juli 9	53.200	27	27.75	226	25.309	130	55.98	296
19	53.173	69	30.01	201	25.179	192	58.94	267
29	53.104	108	32.02	173	24.987	250	61.61	232
Aug. 8	52.996	143	33.75	140	24.737	301	63.93	191
18	52.853	172	35.15	106	24.436	343	65.84	147
28	52.681	194	36.21	69	24.093	374	67.31	99
Sept. 7	52.487	208	36.90	31	23.719	395	68.30	49
17	52.279	212	37.21	9	23.324	403	68.79	3
27	52.067	207	37.12	49	22.921	398	68.76	55
Okt. 7	51.860	191	36.63	89	22.523	379	68.21	107
17	51.669	167	35.74	128	22.144	347	67.14	157
27	51.502	132	34.46	165	21.797	302	65.57	205
Nov. 6	51.370	91	32.81	200	21.495	246	63.52	250
16	51.279	45	30.81	231	21.249	180	61.02	289
26	51.234	5	28.50	255	21.069	109	58.13	319
Dez. 6	51.239	56	25.95	274	20.960	31	54.94	342
16	51.295	106	23.21	284	20.929	48	51.52	354
26	51.401	153	20.37	285	20.977	125	47.98	355
36	51.554		17.52		21.102		44.43	
Mittl. Ort	50.099		31.30		22.199		57.44	
sec δ, tg δ	1.130		+0.526		1.830		+1.533	
a, *a′*	+2.4		−1.4		+1.0		−0.7	
b, *b′*	0.00		+1.00		0.00		+1.00	

Tag	675) 35 Draconis AR.		675) 35 Draconis Dekl.		672) ϑ Herculis AR.		672) ϑ Herculis Dekl.	
1933	17h 52m		+76° 57′		17h 53m		+37° 15′	
Jan. 1	20.56	22	69.90	350	55.864	168	18.38	313
11	20.78	40	66.40	330	56.032	214	15.25	296
21	21.18	57	63.10	298	56.246	253	12.29	270
31	21.75	71	60.12	255	56.499	285	9.59	232
Feb. 10	22.46	83	57.57	203	56.784	310	7.27	185
20	23.29	91	55.54	143	57.094	328	5.42	133
März 2	24.20	97	54.11	79	57.422	337	4.09	75
12	25.17	99	53.32	12	57.759	341	3.34	15
22	26.16	97	53.20	55	58.100	337	3.19	44
Apr. 1	27.13	93	53.75	117	58.437	327	3.63	101
11	28.06	84	54.92	176	58.764	310	4.64	154
21	28.90	74	56.68	226	59.074	287	6.18	199
Mai 1	29.64	62	58.94	269	59.361	260	8.17	237
11	30.26	47	61.63	301	59.621	227	10.54	266
21	30.73	31	64.64	323	59.848	189	13.20	287
31	31.04	15	67.87	337	60.037	148	16.07	298
Juni 10	31.19	2	71.24	339	60.185	103	19.05	301
19*)	31.17	18	74.63	333	60.288	56	22.06	295
29	30.99	34	77.96	318	60.344	8	25.01	283
Juli 9	30.65	50	81.14	295	60.352	39	27.84	262
19	30.15	64	84.09	266	60.313	86	30.46	236
29	29.51	77	86.75	230	60.227	129	32.82	205
Aug. 8	28.74	88	89.05	190	60.098	168	34.87	170
18	27.86	96	90.95	146	59.930	200	36.57	132
28	26.90	103	92.41	98	59.730	226	37.89	89
Sept. 7	25.87	107	93.39	48	59.504	241	38.78	46
17	24.80	109	93.87	4	59.263	248	39.24	1
27	23.71	107	93.83	56	59.015	245	39.25	44
Okt. 7	22.64	104	93.27	107	58.770	229	38.81	90
17	21.60	97	92.20	158	58.541	205	37.91	134
27	20.63	88	90.62	206	58.336	170	36.57	177
Nov. 6	19.75	76	88.56	250	58.166	128	34.80	216
16	18.99	62	86.06	288	58.038	79	32.64	251
26	18.37	45	83.18	318	57.959	27	30.13	279
Dez. 6	17.92	28	80.00	341	57.932	29	27.34	301
16	17.64	9	76.59	353	57.961	84	24.33	313
26	17.55	10	73.06	353	58.045	137	21.20	314
36	17.65		69.53		58.182		18.06	
Mittl. Ort	26.72		82.43		57.281		30.15	
sec δ, tg δ	4.436		+4.322		1.256		+0.761	
a, *a′*	−2.7		−0.7		+2.1		−0.5	
b, *b′*	−0.01		+1.00		0.00		+1.00	

*) Bei Stern 671), 675) und 672) lies Juni 20

Tag	676) γ Draconis				673) ν Ophiuchi				677) 67 Ophiuchi				679) γ Sagittarii			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	17h 55m		+51° 29′		17h 55m		−9° 46′		17h 57m		+2° 55′		18h 1m		−30° 25′	
Jan. 1	1.021	167	33.63	345	19.266	198	9.86	92	16.354	183	50.12	163	29.071	222	43.98	35
11	1.188	226	30.18	326	19.464	231	10.78	92	16.537	217	48.49	158	29.293	261	43.63	28
21	1.414	281	26.92	296	19.695	257	11.70	87	16.754	244	46.91	147	29.554	292	43.35	20
31	1.695	326	23.96	255	19.952	279	12.57	79	16.998	266	45.44	128	29.846	316	43.15	14
Feb. 10	2.021	362	21.41	204	20.231	294	13.36	65	17.264	283	44.16	105	30.162	334	43.01	10
20	2.383	388	19.37	146	20.525	304	14.01	47	17.547	293	43.11	75	30.496	347	42.91	7
März 2	2.771	403	17.91	82	20.829	310	14.48	28	17.840	299	42.36	44	30.843	354	42.84	6
12	3.174	409	17.09	17	21.139	310	14.76	8	18.139	301	41.92	10	31.197	356	42.78	4
22	3.583	404	16.92	48	21.449	308	14.84	14	18.440	298	41.82	24	31.553	354	42.74	4
Apr. 1	3.987	390	17.40	111	21.757	302	14.70	33	18.738	293	42.06	55	31.907	349	42.70	2
11	4.377	366	18.51	168	22.059	292	14.37	52	19.031	282	42.61	85	32.256	338	42.68	0
21	4.743	336	20.19	218	22.351	278	13.85	66	19.313	268	43.46	110	32.594	324	42.68	2
Mai 1	5.079	296	22.37	261	22.629	260	13.19	77	19.581	251	44.56	130	32.918	304	42.70	7
11	5.375	251	24.98	293	22.889	237	12.42	85	19.832	228	45.86	144	33.222	280	42.77	13
21	5.626	200	27.91	316	23.126	212	11.57	88	20.060	201	47.30	154	33.502	250	42.90	19
31	5.826	145	31.07	329	23.338	181	10.69	89	20.261	171	48.84	158	33.752	216	43.09	26
Juni 10	5.971	86	34.36	333	23.519	147	9.80	86	20.432	137	50.42	157	33.968	176	43.35	33
20	6.057	27	37.69	327	23.666	109	8.94	80	20.569	99	51.99	151	34.144	134	43.68	40
29	6.084	34	40.96	313	23.775	68	8.14	73	20.668	60	53.50	143	34.278	88	44.08	44
Juli 9	6.050	93	44.09	292	23.843	27	7.41	65	20.728	20	54.93	131	34.366	40	44.52	47
19	5.957	150	47.01	264	23.870	14	6.76	56	20.748	21	56.24	116	34.406	8	44.99	47
29	5.807	202	49.65	229	23.856	53	6.20	46	20.727	59	57.40	99	34.398	53	45.46	46
Aug. 8	5.605	248	51.94	190	23.803	89	5.74	37	20.668	93	58.39	82	34.345	95	45.92	41
18	5.357	287	53.84	147	23.714	119	5.37	29	20.575	124	59.21	64	34.250	132	46.33	34
28	5.070	316	55.31	101	23.595	144	5.08	20	20.451	147	59.85	44	34.118	159	46.67	23
Sept. 7	4.754	336	56.32	52	23.451	159	4.88	13	20.304	162	60.29	25	33.959	179	46.90	11
17	4.418	343	56.84	1	23.292	165	4.75	5	20.142	169	60.54	6	33.780	187	47.01	2
27	4.075	339	56.85	50	23.127	162	4.70	3	19.973	165	60.60	15	33.593	185	46.99	16
Okt. 7	3.736	323	56.35	100	22.965	147	4.73	10	19.808	152	60.45	36	33.408	169	46.83	29
17	3.413	294	55.35	151	22.818	124	4.83	20	19.656	130	60.09	56	33.239	144	46.54	40
27	3.119	254	53.84	198	22.694	92	5.03	30	19.526	100	59.53	76	33.095	107	46.14	50
Nov. 6	2.865	203	51.86	241	22.602	53	5.33	41	19.426	61	58.77	97	32.988	63	45.64	55
16	2.662	145	49.45	280	22.549	9	5.74	51	19.365	19	57.80	115	32.925	13	45.09	59
26	2.517	81	46.65	310	22.540	38	6.25	63	19.346	27	56.65	132	32.912	40	44.50	59
Dez. 6	2.436	13	43.55	334	22.578	86	6.88	74	19.373	72	55.33	147	32.952	94	43.91	55
16	2.423	57	40.21	346	22.664	131	7.62	82	19.445	117	53.86	156	33.046	146	43.36	49
26	2.480	125	36.75	348	22.795	172	8.44	88	19.562	159	52.30	162	33.192	193	42.87	43
36	2.605		33.27		22.967		9.32		19.721		50.68		33.385		42.44	
Mittl. Ort	2.983		45.77		20.225		0.88		17.330		59.95		30.160		36.28	
sec δ, tg δ	1.606		+1.257		1.015		−0.172		1.001		+0.051		1.160		−0.587	
a, *a′*	+1.4		−0.4		+3.3		−0.4		+3.0		−0.2		+3.9		+0.1	
b, *b′*	0.00		+1.00		0.00		+1.00		0.00		+1.00		0.00		+1.00	

Tag	680) 72 Ophiuchi AR.		Dekl.		681) ο Herculis AR.		Dekl.		682) μ Sagittarii AR.		Dekl.		688) η Serpentis AR.		Dekl.	
1933	$18^h 4^m$		$+9° 32'$		$18^h 4^m$		$+28° 44'$		$18^h 9^m$		$-21° 4'$		$18^h 17^m$		$-2° 55'$	
	s		"		s		"		s		"		s		"	
Jan. 1	9.337	171	60.50	197	54.451	159	56.43	283	44.346	198	49.58	17	49.564	168	13.07	125
11	9.508	207	58.53	189	54.610	200	53.60	270	44.544	234	49.75	21	49.732	203	14.32	123
21	9.715	235	56.64	174	54.810	236	50.90	248	44.778	264	49.96	22	49.935	232	15.55	114
31	9.950	259	54.90	152	55.046	264	48.42	215	45.042	287	50.18	21	50.167	255	16.69	101
Feb. 10	10.209	276	53.38	124	55.310	288	46.27	175	45.329	305	50.39	16	50.422	273	17.70	82
20	10.485	290	52.14	89	55.598	304	44.52	127	45.634	318	50.55	10	50.695	287	18.52	58
März 2	10.775	297	51.25	52	55.902	314	43.25	76	45.952	325	50.65	2	50.982	296	19.10	32
12	11.072	300	50.73	13	56.216	318	42.49	20	46.277	329	50.67	6	51.278	301	19.42	5
22	11.372	298	50.60	28	56.534	318	42.29	34	46.606	328	50.61	17	51.579	301	19.47	24
Apr. 1	11.670	294	50.88	66	56.852	311	42.63	87	46.934	325	50.44	24	51.880	299	19.23	50
11	11.964	284	51.54	100	57.163	299	43.50	135	47.259	316	50.20	31	52.179	293	18.73	74
21	12.248	270	52.54	131	57.462	281	44.85	178	47.575	304	49.89	36	52.472	282	17.99	95
Mai 1	12.518	252	53.85	156	57.743	259	46.63	214	47.879	288	49.53	39	52.754	266	17.04	111
11	12.770	230	55.41	174	58.002	231	48.77	241	48.167	266	49.14	38	53.020	246	15.93	123
21	13.000	203	57.15	186	58.233	198	51.18	261	48.433	239	48.76	36	53.266	222	14.70	130
31	13.203	171	59.01	193	58.431	163	53.79	273	48.672	208	48.40	31	53.488	192	13.40	132
Juni 10	13.374	137	60.94	193	58.594	123	56.52	276	48.880	172	48.09	26	53.680	159	12.08	130
20	13.511	100	62.87	189	58.717	80	59.28	271	49.052	132	47.83	19	53.839	123	10.78	125
29	23 13.611	59	64.76	178	23 58.797	36	61.99	261	24 49.184	90	47.64	12	26 53.962	82	9.53	117
Juli 9	13.670	19	66.54	165	58.833	9	64.60	243	49.274	46	47.52	6	54.044	41	8.36	105
19	13.689	22	68.19	148	58.824	53	67.03	220	49.320	1	47.46	0	54.085	1	7.31	92
29	13.667	61	69.67	128	58.771	94	69.23	193	49.321	43	47.46	4	54.084	41	6.39	79
Aug. 8	13.606	96	70.95	107	58.677	132	71.16	162	49.278	81	47.50	6	54.043	79	5.60	64
18	13.510	127	72.02	84	58.545	165	72.78	127	49.197	117	47.56	6	53.964	111	4.96	49
28	13.383	151	72.86	59	58.380	189	74.05	91	49.080	144	47.62	6	53.853	137	4.47	35
Sept. 7	13.232	168	73.45	34	58.191	207	74.96	52	48.936	163	47.68	3	53.716	156	4.12	20
17	13.064	175	73.79	8	57.984	215	75.48	12	48.773	172	47.71	1	53.560	166	3.92	5
27	12.889	173	73.87	17	57.769	214	75.60	29	48.601	171	47.70	5	53.394	166	3.87	9
Okt. 7	12.716	161	73.70	44	57.555	200	75.31	69	48.430	158	47.65	8	53.228	156	3.96	23
17	12.555	139	73.26	70	57.355	180	74.62	110	48.272	136	47.57	11	53.072	136	4.19	38
27	12.416	110	72.56	96	57.175	148	73.52	148	48.136	104	47.46	12	52.936	108	4.57	54
Nov. 6	12.306	74	71.60	121	57.027	110	72.04	185	48.032	63	47.34	12	52.828	72	5.11	68
16	12.232	31	70.39	143	56.917	66	70.19	218	47.969	19	47.22	10	52.756	32	5.79	83
26	12.201	13	68.96	163	56.851	17	68.01	245	47.950	30	47.12	5	52.724	12	6.62	97
Dez. 6	12.214	59	67.33	180	56.834	33	65.56	266	47.980	79	47.07	0	52.736	58	7.59	109
16	12.273	104	65.53	190	56.867	83	62.90	279	48.059	128	47.07	7	52.794	101	8.68	117
26	12.377	147	63.63	195	56.950	130	60.11	283	48.187	171	47.14	12	52.895	143	9.85	122
36	12.524		61.68		57.080		57.28		48.358		47.26		53.038		11.07	
Mittl. Ort	10.358		70.55		55.710		67.26		45.350		41.12		50.539		3.76	
sec δ, tg δ	1.014		+0.168		1.141		+0.549		1.072		−0.385		1.001		−0.051	
a, a'	+2.8		+0.4		+2.3		+0.4		+3.6		+0.9		+3.1		+1.6	
b, b'	0.00		+1.00		0.00		+1.00		0.00		+1.00		0.00		+1.00	

Scheinbare Sternörter 1933

Tag	689) ε Sagittarii				690) 109 Herculis				691) α Telescopii				695) χ Draconis			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$18^h 19^m$		−34° 25′		$18^h 20^m$		+21° 43′		$18^h 21^m$		−46° 0′		$18^h 22^m$		+72° 41′	
Jan. 1	42.353 s	210	13.12″	69	49.372 s	147	66.43″	252	58.977 s	235	33.66″	140	11.10 s	11	65.48″	356
11	42.563	251	12.43	62	49.519	186	63.91	243	59.212	286	32.26	128	11.21	24	61.92	344
21	42.814	286	11.81	56	49.705	219	61.48	225	59.498	328	30.98	117	11.45	38	58.48	319
31	43.100	315	11.25	49	49.924	248	59.23	197	59.826	363	29.81	102	11.83	49	55.29	284
Feb. 10	43.415	336	10.76	40	50.172	270	57.26	163	60.189	390	28.79	87	12.32	60	52.45	236
20	43.751	352	10.36	35	50.442	288	55.63	120	60.579	411	27.92	71	12.92	67	50.09	180
März 2	44.103	363	10.01	31	50.730	300	54.43	74	60.990	424	27.21	54	13.59	73	48.29	118
12	44.466	369	9.70	26	51.030	306	53.69	24	61.414	431	26.67	38	14.32	76	47.11	51
22	44.835	371	9.44	20	51.336	308	53.45	25	61.845	434	26.29	21	15.08	77	46.60	15
Apr. 1	45.206	367	9.24	15	51.644	305	53.70	74	62.279	430	26.08	4	15.85	75	46.75	80
11	45.573	360	9.09	9	51.949	297	54.44	118	62.709	421	26.04	13	16.60	71	47.55	143
21	45.933	347	9.00	1	52.246	284	55.62	158	63.130	406	26.17	31	17.31	65	48.98	198
Mai 1	46.280	329	8.99	8	52.530	265	57.20	191	63.536	384	26.48	49	17.96	56	50.96	246
11	46.609	307	9.07	17	52.795	242	59.11	218	63.920	357	26.97	66	18.52	46	53.42	285
21	46.916	277	9.24	27	53.037	214	61.29	236	64.277	321	27.63	83	18.98	36	56.27	315
31	47.193	242	9.51	38	53.251	181	63.65	248	64.598	280	28.46	98	19.34	24	59.42	334
Juni 10	47.435	202	9.89	48	53.432	144	66.13	252	64.878	232	29.44	111	19.58	11	62.76	345
20	47.637	158	10.37	56	53.576	104	68.65	249	65.110	180	30.55	121	19.69	1	66.21	346
29	47.795	110	10.93	64	53.680	62	71.14	239	65.290	123	31.76	128	19.68	14	69.67	337
Juli 9	47.905	59	11.57	68	53.742	18	73.53	225	65.413	64	33.04	130	19.54	26	73.04	321
19	47.964	9	12.25	70	53.760	25	75.78	204	65.477	4	34.34	128	19.28	38	76.25	298
29	47.973	41	12.95	68	53.735	66	77.82	181	65.481	55	35.62	121	18.90	49	79.23	266
Aug. 8	47.932	87	13.63	62	53.669	105	79.63	154	65.426	108	36.83	109	18.41	58	81.89	230
18	47.845	127	14.25	54	53.564	138	81.17	123	65.318	157	37.92	92	17.83	66	84.19	189
28	47.718	160	14.79	42	53.426	164	82.40	91	65.161	195	38.84	71	17.17	72	86.08	144
Sept. 7	47.558	183	15.21	27	53.262	184	83.31	57	64.966	222	39.55	45	16.45	77	87.52	94
17	47.375	195	15.48	11	53.078	194	83.88	22	64.744	239	40.00	18	15.68	80	88.46	44
27	47.180	197	15.59	8	52.884	195	84.10	14	64.505	239	40.18	12	14.88	81	88.90	9
Okt. 7	46.983	184	15.51	25	52.689	186	83.96	50	64.266	227	40.06	41	14.07	78	88.81	63
17	46.799	161	15.26	42	52.503	167	83.46	86	64.039	199	39.65	69	13.29	75	88.18	115
27	46.638	126	14.84	56	52.336	139	82.60	121	63.840	161	38.96	94	12.54	69	87.03	168
Nov. 6	46.512	84	14.28	69	52.197	104	81.39	154	63.679	110	38.02	116	11.85	61	85.35	215
16	46.428	33	13.59	76	52.093	63	79.85	184	63.569	53	36.86	133	11.24	51	83.20	260
26	46.395	20	12.83	81	52.030	19	78.01	210	63.516	11	35.53	144	10.73	40	80.60	297
Dez. 6	46.415	75	12.02	82	52.011	29	75.91	230	63.527	75	34.09	150	10.33	26	77.63	327
16	46.490	129	11.20	80	52.040	75	73.61	245	63.602	139	32.59	151	10.07	13	74.36	347
26	46.619	180	10.40	75	52.115	120	71.16	250	63.741	199	31.08	146	9.94	2	70.89	353
36	46.799		9.65		52.235		68.66		63.940		29.62		9.96		67.36	
Mittl. Ort	43.483		4.99		50.544		76.28		60.339		25.87		15.98		75.19	
sec δ, tg δ	1.212		−0.685		1.077		+0.399		1.440		−1.036		3.364		+3.212	
a, *a′*	+4.0		+1.7		+2.5		+1.8		+4.5		+1.9		−1.2		+1.9	
b, *b′*	0.00		+1.00		0.00		+1.00		−0.01		+1.00		+0.02		+1.00	

Tag	694) *b* Draconis AR.	Δ	694) *b* Draconis Dekl.	Δ	699) α Lyrae AR.	Δ	699) α Lyrae Dekl.	Δ	698) ζ Pavonis AR.	Δ	698) ζ Pavonis Dekl.	Δ	703) 110 Herculis AR.	Δ	703) 110 Herculis Dekl.	Δ
1933	$18^h 22^m$		+58° 45′		$18^h 34^m$		+38° 42′		$18^h 35^m$		−71° 29′		$18^h 42^m$		+20° 28′	
Jan. 1	53.346	117	31.15	353	38.619	119	63.88	310	9.69	38	27.40	274	45.481	125	42.39	241
11	53.463	194	27.62	340	38.738	168	60.78	302	10.07	49	24.66	260	45.606	164	39.98	234
21	53.657	266	24.22	316	38.906	211	57.76	282	10.56	59	22.06	240	45.770	199	37.64	220
31	53.923	327	21.06	279	39.117	250	54.94	250	11.15	68	19.66	213	45.969	229	35.44	194
Feb. 10	54.250	381	18.27	232	39.367	283	52.44	209	11.83	76	17.53	182	46.198	254	33.50	163
20	54.631	422	15.95	176	39.650	309	50.35	160	12.59	81	15.71	149	46.452	274	31.87	123
März 2	55.053	452	14.19	114	39.959	327	48.75	105	13.40	85	14.22	113	46.726	289	30.64	79
12	55.505	468	13.05	48	40.286	340	47.70	46	14.25	88	13.09	75	47.015	300	29.85	31
22	55.973	472	12.57	19	40.626	345	47.24	15	15.13	89	12.34	37	47.315	306	29.54	18
Apr. 1	56.445	463	12.76	84	40.971	343	47.39	73	16.02	88	11.97	2	47.621	307	29.72	65
11	56.908	442	13.60	146	41.314	334	48.12	130	16.90	86	11.99	41	47.928	301	30.37	110
21	57.350	411	15.06	201	41.648	319	49.42	179	17.76	83	12.40	78	48.229	293	31.47	150
Mai 1	57.761	368	17.07	248	41.967	296	51.21	223	18.59	78	13.18	113	48.522	278	32.97	184
11	58.129	317	19.55	287	42.263	268	53.44	259	19.37	72	14.31	147	48.800	257	34.81	211
21	58.446	258	22.42	316	42.531	234	56.03	285	20.09	64	15.78	176	49.057	232	36.92	232
31	58.704	193	25.58	335	42.765	194	58.88	303	20.73	54	17.54	203	49.289	201	39.24	245
Juni 10	58.897	123	28.93	346	42.959	149	61.91	313	21.27	44	19.57	223	49.490	165	41.69	251
20	59.020	51	32.39	346	43.108	102	65.04	314	21.71	33	21.80	238	49.655	127	44.20	249
29*)	[28] 59.071	23	35.85	337	43.210	52	68.18	306	22.04	21	24.18	246	[3] 49.782	84	46.69	242
Juli 9	59.048	96	39.22	320	43.262	1	71.24	291	22.25	8	26.64	248	49.866	40	49.11	229
19	58.952	165	42.42	296	43.263	50	74.15	270	22.33	5	29.12	240	49.906	3	51.40	211
29	58.787	230	45.38	266	43.213	97	76.85	244	22.28	17	31.52	225	49.903	47	53.51	188
Aug. 8	58.557	290	48.04	229	43.116	142	79.29	210	22.11	28	33.77	203	49.856	87	55.39	163
18	58.267	340	50.33	187	42.974	181	81.39	175	21.83	39	35.80	172	49.769	122	57.02	134
28	57.927	380	52.20	142	42.793	212	83.14	135	21.44	47	37.52	135	49.647	153	58.36	103
Sept. 7	57.547	410	53.62	94	42.581	236	84.49	93	20.97	53	38.87	91	49.494	174	59.39	70
17	57.137	426	54.56	42	42.345	250	85.42	47	20.44	57	39.78	44	49.320	188	60.09	36
27	56.711	429	54.98	10	42.095	254	85.89	2	19.87	59	40.22	7	49.132	192	60.45	2
Okt. 7	56.282	418	54.88	63	41.841	247	85.91	45	19.28	57	40.15	58	48.940	187	60.47	33
17	55.864	392	54.25	116	41.594	229	85.46	92	18.71	52	39.57	108	48.753	171	60.14	68
27	55.472	355	53.09	168	41.365	202	84.54	137	18.19	45	38.49	155	48.582	148	59.46	103
Nov. 6	55.117	303	51.41	215	41.163	165	83.17	180	17.74	36	36.94	196	48.434	115	58.43	136
16	54.814	241	49.26	259	40.998	122	81.37	220	17.38	25	34.98	231	48.319	78	57.07	166
26	54.573	171	46.67	295	40.876	73	79.17	253	17.13	11	32.67	257	48.241	35	55.41	193
Dez. 6	54.402	95	43.72	325	40.803	21	76.64	281	17.02	2	30.10	274	48.206	9	53.48	214
16	54.307	14	40.47	343	40.782	33	73.83	300	17.04	16	27.36	282	48.215	54	51.34	230
26	54.293	68	37.04	352	40.815	86	70.83	308	17.20	29	24.54	281	48.269	99	49.04	238
36	54.361		33.52		40.901		67.75		17.49		21.73		48.368		46.66	
Mittl. Ort	55.945		40.99		40.184		72.96		12.89		19.61		46.658		51.21	
sec δ, tg δ	1.928		+1.649		1.282		+0.802		3.150		−2.987		1.067		+0.374	
a, *a′*	+0.9		+2.0		+2.0		+3.0		+7.0		+3.1		+2.6		+3.7	
b, *b′*	+0.01		+0.99		+0.01		+0.99		−0.03		+0.99		0.00		+0.98	

*) Bei Stern 699), 698) und 703) lies Juni 30

Tag	704) λ Pavonis				705) β Lyrae				707) ο Draconis				706) σ Sagittarii			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$18^h\,45^m$		$-62°\,15'$		$18^h\,47^m$		$+33°\,16'$		$18^h\,50^m$		$+59°\,17'$		$18^h\,51^m$		$-26°\,22'$	
Jan. 1	58.75	27	69.30	239	34.928	108	53.66	290	10.091	67	74.27	349	5.670	162	63.39	34
11	59.02	34	66.91	228	35.036	154	50.76	285	10.158	146	70.78	344	5.832	202	63.05	32
21	59.36	41	64.63	214	35.190	194	47.91	267	10.304	221	67.34	325	6.034	235	62.73	32
31	59.77	47	62.49	194	35.384	231	45.24	239	10.525	289	64.09	294	6.269	265	62.41	34
Feb. 10	60.24	52	60.55	171	35.615	262	42.85	202	10.814	350	61.15	253	6.534	289	62.07	34
20	60.76	56	58.84	144	35.877	287	40.83	157	11.164	399	58.62	201	6.823	308	61.73	37
März 2	61.32	59	57.40	116	36.164	306	39.26	105	11.563	437	56.61	143	7.131	322	61.36	42
12	61.91	61	56.24	86	36.470	320	38.21	50	12.000	464	55.18	78	7.453	333	60.94	46
22	62.52	62	55.38	54	36.790	328	37.71	8	12.464	477	54.40	12	7.786	340	60.48	49
Apr. 1	63.14	62	54.84	23	37.118	329	37.79	64	12.941	478	54.28	54	8.126	342	59.99	52
11	63.76	61	54.61	9	37.447	324	38.43	117	13.419	465	54.82	117	8.468	341	59.47	53
21	64.37	60	54.70	42	37.771	312	39.60	166	13.884	441	55.99	175	8.809	335	58.94	52
Mai 1	64.97	57	55.12	73	38.083	295	41.26	208	14.325	405	57.74	227	9.144	323	58.42	49
11	65.54	53	55.85	103	38.378	270	43.34	243	14.730	359	60.01	270	9.467	305	57.93	42
21	66.07	47	56.88	131	38.648	241	45.77	269	15.089	304	62.71	305	9.772	283	57.51	35
31	66.54	42	58.19	155	38.889	205	48.46	287	15.393	241	65.76	330	10.055	253	57.16	24
Juni 10	66.96	35	59.74	177	39.094	166	51.33	298	15.634	172	69.06	346	10.308	218	56.92	14
20	67.31	28	61.51	193	39.260	121	54.31	300	15.806	100	72.52	351	10.526	179	56.78	3
30	67.59	19	63.44	204	39.381	74	57.31	293	15.906	24	76.03	349	10.705	135	56.75	8
Juli 9	[3] 67.78	10	65.48	209	[4] 39.455	26	60.24	281	[5] 15.930	51	79.52	337	[5] 10.840	87	56.83	18
19	67.88	1	67.57	207	39.481	22	63.05	261	15.879	125	82.89	319	10.927	40	57.01	26
29	67.89	7	69.64	197	39.459	69	65.66	237	15.754	195	86.08	292	10.967	8	57.27	33
Aug. 8	67.82	15	71.61	181	39.390	113	68.03	207	15.559	259	89.00	259	10.959	54	57.60	36
18	67.67	23	73.42	158	39.277	151	70.10	173	15.300	315	91.59	221	10.905	95	57.96	36
28	67.44	30	75.00	127	39.126	184	71.83	137	14.985	363	93.80	179	10.810	130	58.32	34
Sept. 7	67.14	34	76.27	92	38.942	208	73.20	97	14.622	400	95.59	132	10.680	156	58.66	29
17	66.80	37	77.19	52	38.734	224	74.17	56	14.222	423	96.91	83	10.524	173	58.95	21
27	66.43	38	77.71	9	38.510	229	74.73	12	13.799	433	97.74	30	10.351	180	59.16	12
Okt. 7	66.05	37	77.80	36	38.281	225	74.85	31	13.366	430	98.04	23	10.171	175	59.28	2
17	65.68	34	77.44	80	38.056	210	74.54	75	12.936	413	97.81	77	9.996	158	59.30	8
27	65.34	30	76.64	122	37.846	186	73.79	118	12.523	382	97.04	130	9.838	132	59.22	17
Nov. 6	65.04	23	75.42	159	37.660	153	72.61	159	12.141	337	95.74	181	9.706	97	59.05	25
16	64.81	16	73.83	191	37.507	113	71.02	197	11.804	281	93.93	228	9.609	55	58.80	31
26	64.65	7	71.92	215	37.394	69	69.05	230	11.523	216	91.65	270	9.554	9	58.49	35
Dez. 6	64.58	2	69.77	232	37.325	21	66.75	258	11.307	143	88.95	304	9.545	39	58.14	37
16	64.60	11	67.45	241	37.304	30	64.17	277	11.164	64	85.91	329	9.584	87	57.77	37
26	64.71	21	65.04	243	37.334	77	61.40	287	11.100	16	82.62	343	9.671	134	57.40	37
36	64.92		62.61		37.411		58.53		11.116		79.19		9.805		57.03	
Mittl. Ort	60.80		60.60		36.360		61.94		12.846		81.58		6.678		54.20	
sec δ, tg δ	2.149		−1.902		1.196		+0.657		1.959		+1.685		1.116		−0.496	
a, *a'*	+5.6		+4.0		+2.2		+4.1		+0.9		+4.4		+3.7		+4.4	
b, *b'*	−0.03		+0.98		+0.01		+0.98		+0.02		+0.98		−0.01		+0.98	

Tag	709) ϑ Serpent. pr. AR.		Dekl.		708) λ Telescopii AR.		Dekl.	
1933	18h 52m		+4° 6′		18h 53m		−53° 1′	
Jan. 1	52.308	129	45.05	152	4.832	210	50.26	194
11	52.437	166	43.53	149	5.042	272	48.32	188
21	52.603	196	42.04	138	5.314	325	46.44	178
31	52.799	225	40.66	122	5.639	370	44.66	164
Feb. 10	53.024	247	39.44	99	6.009	409	43.02	147
20	53.271	265	38.45	71	6.418	440	41.55	129
März 2	53.536	281	37.74	40	6.858	462	40.26	108
12	53.817	291	37.34	6	7.320	480	39.18	86
22	54.108	298	37.28	29	7.800	489	38.32	63
Apr. 1	54.406	300	37.57	63	8.289	492	37.69	40
11	54.706	299	38.20	93	8.781	488	37.29	15
21	55.005	293	39.13	121	9.269	478	37.14	11
Mai 1	55.298	282	40.34	144	9.747	458	37.25	36
11	55.580	265	41.78	161	10.205	431	37.61	61
21	55.845	244	43.39	173	10.636	396	38.22	85
31	56.089	217	45.12	180	11.032	351	39.07	109
Juni 10	56.306	185	46.92	179	11.383	300	40.16	128
20	56.491	148	48.71	176	11.683	241	41.44	144
30	56.639	109	50.47	168	11.924	176	42.88	157
Juli 9	56.748	67	52.15	155	12.100	109	44.45	164
19	56.815	25	53.70	140	12.209	38	46.09	166
29	56.840	18	55.10	123	12.247	31	47.75	162
Aug. 8	56.822	59	56.33	104	12.216	98	49.37	152
18	56.763	94	57.37	84	12.118	157	50.89	135
28	56.669	124	58.21	64	11.961	208	52.24	112
Sept. 7	56.545	148	58.85	43	11.753	247	53.36	84
17	56.397	163	59.28	21	11.506	274	54.20	52
27	56.234	168	59.49	0	11.232	284	54.72	17
Okt. 7	56.066	164	59.49	21	10.948	279	54.89	19
17	55.902	150	59.28	42	10.669	257	54.70	56
27	55.752	127	58.86	62	10.412	222	54.14	91
Nov. 6	55.625	98	58.24	83	10.190	171	53.23	122
16	55.527	61	57.41	101	10.019	112	52.01	150
26	55.466	22	56.40	118	9.907	45	50.51	170
Dez. 6	55.444	21	55.22	133	9.862	25	48.81	186
16	55.465	63	53.89	144	9.887	98	46.95	194
26	55.528	104	52.45	149	9.985	167	45.01	197
36	55.632		50.96		10.152		43.04	
Mittl. Ort	53.318		53.81		6.345		41.03	
sec δ, tg δ	1.003		+0.072		1.663		−1.328	
a, *a′*	+3.0		+4.6		+4.8		+4.6	
b, *b′*	0.00		+0.97		−0.02		+0.97	

Tag	711) *R* Lyrae AR.		Dekl.		713) γ Lyrae AR.		Dekl.	
1933	18h 53m		+43° 50′		18h 56m		+32° 35′	
Jan. 1	16.024	89	77.16	321	24.781	99	39.86	286
11	16.113	143	73.95	315	24.880	144	37.00	281
21	16.256	193	70.80	299	25.024	184	34.19	265
31	16.449	238	67.81	270	25.208	222	31.54	239
Feb. 10	16.687	277	65.11	230	25.430	253	29.15	203
20	16.964	310	62.81	182	25.683	280	27.12	159
März 2	17.274	335	60.99	127	25.963	300	25.53	109
12	17.609	353	59.72	66	26.263	316	24.44	54
22	17.962	363	59.06	4	26.579	324	23.90	3
Apr. 1	18.325	365	59.02	57	26.903	328	23.93	58
11	18.690	359	59.59	116	27.231	325	24.51	112
21	19.049	346	60.75	170	27.556	315	25.63	160
Mai 1	19.395	324	62.45	218	27.871	299	27.23	203
11	19.719	295	64.63	257	28.170	277	29.26	238
21	20.014	260	67.20	290	28.447	248	31.64	266
31	20.274	217	70.10	311	28.695	214	34.30	285
Juni 10	20.491	171	73.21	325	28.909	175	37.15	296
20	20.662	120	76.46	329	29.084	131	40.11	299
30	20.782	65	79.75	325	29.215	84	43.10	294
Juli 9	20.847	10	83.00	314	29.299	37	46.04	282
19	20.857	44	86.14	295	29.336	11	48.86	265
29	20.813	97	89.09	269	29.325	59	51.51	240
Aug. 8	20.716	146	91.78	239	29.266	103	53.91	212
18	20.570	190	94.17	203	29.163	143	56.03	179
28	20.380	227	96.20	162	29.020	176	57.82	143
Sept. 7	20.153	254	97.82	120	28.844	201	59.25	105
17	19.899	274	99.02	73	28.643	219	60.30	63
27	19.625	280	99.75	25	28.424	225	60.93	21
Okt. 7	19.345	278	100.00	23	28.199	223	61.14	22
17	19.067	263	99.77	73	27.976	209	60.92	66
27	18.804	239	99.04	122	27.767	187	60.26	109
Nov. 6	18.565	204	97.82	168	27.580	156	59.17	150
16	18.361	161	96.14	211	27.424	118	57.67	188
26	18.200	112	94.03	250	27.306	74	55.79	221
Dez. 6	18.088	59	91.53	280	27.232	28	53.58	250
16	18.029	3	88.73	304	27.204	21	51.08	270
26	18.026	54	85.69	317	27.225	69	48.38	282
36	18.080		82.52		27.294		45.56	
Mittl. Ort	17.806		84.71		26.204		47.58	
sec δ, tg δ	1.387		+0.961		1.187		+0.640	
a, *a′*	+1.8		+4.6		+2.2		+4.9	
b, *b′*	+0.01		+0.97		+0.01		+0.97	

Scheinbare Sternörter 1933

Tag	716) ζ Aquilae				717) λ Aquilae			
	AR.		Dekl.		AR.		Dekl.	
1933	19h 2m		+13° 45′		19h 2m		−4° 59′	
Jan. 1	18.716	112	36.87	202	40.646	127	12.82	96
11	18.828	149	34.85	197	40.773	164	13.78	93
21	18.977	182	32.88	186	40.937	195	14.71	86
31	19.159	213	31.02	165	41.132	223	15.57	74
Feb. 10	19.372	238	29.37	139	41.355	246	16.31	57
20	19.610	259	27.98	104	41.601	265	16.88	36
März 2	19.869	276	26.94	66	41.866	281	17.24	12
12	20.145	289	26.28	25	42.147	292	17.36	13
22	20.434	298	26.03	19	42.439	301	17.23	39
Apr. 1	20.732	302	26.22	61	42.740	305	16.84	63
11	21.034	302	26.83	101	43.045	306	16.21	87
21	21.336	296	27.84	136	43.351	301	15.34	105
Mai 1	21.632	285	29.20	167	43.652	292	14.29	121
11	21.917	269	30.87	192	43.944	277	13.08	132
21	22.186	247	32.79	210	44.221	257	11.76	137
31	22.433	220	34.89	222	44.478	232	10.39	140
Juni 10	22.653	187	37.11	227	44.710	201	8.99	136
20	22.840	149	39.38	225	44.911	165	7.63	130
30	22.989	109	41.63	219	45.076	125	6.33	121
Juli 9	23.098	67	43.82	206	45.201	83	5.12	108
19	23.165	23	45.88	191	45.284	40	4.04	95
29	23.188	21	47.79	170	45.324	3	3.09	80
Aug. 8	23.167	61	49.49	148	45.321	45	2.29	65
18	23.106	99	50.97	123	45.276	83	1.64	50
28	23.007	130	52.20	97	45.193	115	1.14	36
Sept. 7	22.877	154	53.17	69	45.078	139	0.78	22
17	22.723	171	53.86	39	44.939	156	0.56	8
27	22.552	178	54.25	11	44.783	164	0.48	4
Okt. 7	22.374	175	54.36	19	44.619	160	0.52	17
17	22.199	163	54.17	49	44.459	148	0.69	29
27	22.036	143	53.68	78	44.311	127	0.98	40
Nov. 6	21.893	114	52.90	106	44.184	97	1.38	52
16	21.779	79	51.84	132	44.087	61	1.90	63
26	21.700	40	50.52	156	44.026	23	2.53	73
Dez. 6	21.660	1	48.96	175	44.003	20	3.26	83
16	21.661	44	47.21	190	44.023	62	4.09	90
26	21.705	86	45.31	198	44.085	102	4.99	93
36	21.791		43.33		44.187		5.92	
Mittl. Ort	19.812		45.01		41.606		3.99	
sec δ, tg δ	1.030		+0.245		1.004		−0.087	
a, a′	+2.8		+5.4		+3.2		+5.4	
b, b′	0.00		+0.96		0.00		+0.96	

Tag	718) α Coron. austr.				720) π Sagittarii			
	AR.		Dekl.		AR.		Dekl.	
1933	19h 4m		−38° 0′		19h 5m		−21° 7′	
Jan. 1	53.812	161	48.32	110	45.844	140	63.56	5
11	53.973	208	47.22	110	45.984	178	63.51	7
21	54.181	248	46.12	107	46.162	212	63.44	10
31	54.429	283	45.05	103	46.374	241	63.34	14
Feb. 10	54.712	312	44.02	97	46.615	266	63.20	21
20	55.024	337	43.05	92	46.881	286	62.99	28
März 2	55.361	355	42.13	85	47.167	302	62.71	38
12	55.716	370	41.28	79	47.469	315	62.33	48
22	56.086	380	40.49	70	47.784	324	61.85	57
Apr. 1	56.466	386	39.79	61	48.108	329	61.28	65
11	56.852	386	39.18	51	48.437	329	60.63	71
21	57.238	380	38.67	37	48.766	326	59.92	75
Mai 1	57.618	369	38.30	24	49.092	317	59.17	76
11	57.987	352	38.06	7	49.409	303	58.41	74
21	58.339	327	37.99	9	49.712	282	57.67	68
31	58.666	295	38.08	26	49.994	255	56.99	61
Juni 10	58.961	257	38.34	42	50.249	223	56.38	51
20	59.218	213	38.76	57	50.472	185	55.87	40
30	59.431	163	39.33	72	50.657	143	55.47	27
Juli 9	59.594	111	40.05	83	50.800	99	55.20	16
19	59.705	56	40.88	90	50.899	51	55.04	5
29	59.761	1	41.78	93	50.950	5	54.99	5
Aug. 8	59.762	51	42.71	93	50.955	40	55.04	12
18	59.711	100	43.64	87	50.915	81	55.16	18
28	59.611	141	44.51	77	50.834	116	55.34	21
Sept. 7	59.470	173	45.28	64	50.718	144	55.55	21
17	59.297	196	45.92	45	50.574	162	55.76	19
27	59.101	206	46.37	25	50.412	171	55.95	16
Okt. 7	58.895	204	46.62	3	50.241	168	56.11	12
17	58.691	189	46.65	20	50.073	156	56.23	7
27	58.502	162	46.45	42	49.917	133	56.30	1
Nov. 6	58.340	125	46.03	61	49.784	101	56.31	2
16	58.215	81	45.42	78	49.683	64	56.29	5
26	58.134	31	44.64	93	49.619	21	56.24	7
Dez. 6	58.103	23	43.71	103	49.598	23	56.17	7
16	58.126	77	42.68	109	49.621	70	56.10	8
26	58.203	129	41.59	112	49.691	112	56.02	7
36	58.332		40.47		49.803		55.95	
Mittl. Ort	54.917		38.62		46.802		54.22	
sec δ, tg δ	1.269		−0.782		1.072		−0.387	
a, a′	+4.1		+5.6		+3.6		+5.7	
b, b′	−0.01		+0.96		−0.01		+0.96	

Tag	723) δ Draconis AR.		723) δ Draconis Dekl.		724) θ Lyrae AR.		724) θ Lyrae Dekl.	
1933	$19^h\ 12^m$		$+67^\circ\ 32'$		$19^h\ 14^m$		$+38^\circ\ 0'$	
Jan. 1	28.76	2	32.22	345	0.921	71	41.91	299
11	28.74	9	28.77	347	0.992	120	38.92	296
21	28.83	20	25.30	335	1.112	166	35.96	284
31	29.03	30	21.95	311	1.278	208	33.12	259
Feb. 10	29.33	39	18.84	274	1.486	244	30.53	225
20	29.72	47	16.10	227	1.730	277	28.28	181
März 2	30.19	53	13.83	172	2.007	302	26.47	131
12	30.72	58	12.11	109	2.309	323	25.16	74
22	31.30	60	11.02	44	2.632	336	24.42	15
Apr. 1	31.90	61	10.58	23	2.968	344	24.27	43
11	32.51	61	10.81	88	3.312	343	24.70	100
21	33.12	58	11.69	148	3.655	336	25.70	153
Mai 1	33.70	53	13.17	204	3.991	321	27.23	200
11	34.23	48	15.21	252	4.312	299	29.23	240
21	34.71	41	17.73	292	4.611	270	31.63	272
31	35.12	32	20.65	322	4.881	235	34.35	295
Juni 10	35.44	24	23.87	343	5.116	194	37.30	311
20	35.68	14	27.30	356	5.310	148	40.41	317
30	35.82	4	30.86	358	5.458	99	43.58	316
Juli 10	35.86	6	34.44	353	5.557	48	46.74	307
19	35.80	15	37.97	338	5.605	4	49.81	290
29	35.65	25	41.35	317	5.601	55	52.71	269
Aug. 8	35.40	34	44.52	288	5.546	103	55.40	241
18	35.06	42	47.40	254	5.443	146	57.81	208
28	34.64	48	49.94	214	5.297	183	59.89	171
Sept. 7	34.16	53	52.08	170	5.114	213	61.60	132
17	33.63	57	53.78	122	4.901	233	62.92	89
27	33.06	60	55.00	70	4.668	245	63.81	44
Okt. 7	32.46	60	55.70	16	4.423	244	64.25	2
17	31.86	59	55.86	38	4.179	235	64.23	48
27	31.27	56	55.48	94	3.944	216	63.75	95
Nov. 6	30.71	51	54.54	148	3.728	186	62.80	140
16	30.20	45	53.06	199	3.542	150	61.40	183
26	29.75	38	51.07	244	3.392	107	59.57	220
Dez. 6	29.37	28	48.63	285	3.285	60	57.37	252
16	29.09	18	45.78	316	3.225	10	54.85	277
26	28.91	8	42.62	336	3.215	39	52.08	292
36	28.83		39.26		3.254		49.16	
Mittl. Ort	32.69		37.02		2.510		48.12	
sec δ, tg δ	2.618		+2.420		1.269		+0.782	
a, *a'*	0.0		+6.2		+2.1		+6.4	
b, *b'*	+0.05		+0.95		+0.02		+0.95	

Tag	725) ω Aquilae AR.		725) ω Aquilae Dekl.		726) κ Cygni AR.		726) κ Cygni Dekl.	
1933	$19^h\ 14^m$		$+11^\circ\ 28'$		$19^h\ 15^m$		$+53^\circ\ 14'$	
Jan. 1	39.217	101	16.04	186	31.002	39	33.61	334
11	39.318	139	14.18	182	31.041	106	30.27	333
21	39.457	172	12.36	172	31.147	170	26.94	321
31	39.629	202	10.64	153	31.317	228	23.73	297
Feb. 10	39.831	229	9.11	128	31.545	283	20.76	260
20	40.060	250	7.83	97	31.828	328	18.16	213
März 2	40.310	269	6.86	60	32.156	367	16.03	159
12	40.579	284	6.26	21	32.523	394	14.44	98
22	40.863	295	6.05	20	32.917	414	13.46	34
Apr. 1	41.158	301	6.25	60	33.331	422	13.12	30
11	41.459	303	6.85	98	33.753	420	13.42	94
21	41.762	299	7.83	133	34.173	407	14.36	152
Mai 1	42.061	290	9.16	162	34.580	385	15.88	206
11	42.351	277	10.78	186	34.965	352	17.94	251
21	42.628	255	12.64	203	35.317	311	20.45	290
31	42.883	230	14.67	214	35.628	262	23.35	317
Juni 10	43.113	199	16.81	220	35.890	207	26.52	338
20	43.312	163	19.01	218	36.097	146	29.90	348
30	43.475	123	21.19	211	36.243	83	33.38	349
Juli 10	43.598	80	23.30	200	36.326	16	36.87	342
19	43.678	36	25.30	185	36.342	49	40.29	327
29	43.714	7	27.15	166	36.293	112	43.56	306
Aug. 8	43.707	49	28.81	144	36.181	172	46.62	276
18	43.658	87	30.25	120	36.009	226	49.38	242
28	43.571	119	31.45	95	35.783	272	51.80	203
Sept. 7	43.452	146	32.40	69	35.511	309	53.83	160
17	43.306	164	33.09	42	35.202	335	55.43	112
27	43.142	172	33.51	15	34.867	349	56.55	62
Okt. 7	42.970	172	33.66	13	34.518	353	57.17	10
17	42.798	162	33.53	41	34.165	342	57.27	43
27	42.636	143	33.12	67	33.823	321	56.84	95
Nov. 6	42.493	116	32.45	94	33.502	287	55.89	147
16	42.377	84	31.51	119	33.215	244	54.42	196
26	42.293	46	30.32	140	32.971	192	52.46	239
Dez. 6	42.247	6	28.92	159	32.779	132	50.07	277
16	42.241	35	27.33	174	32.647	69	47.30	306
26	42.276	76	25.59	181	32.578	3	44.24	325
36	42.352		23.78		32.575		40.99	
Mittl. Ort	40.283		23.80		33.315		38.82	
sec δ, tg δ	1.020		+0.203		1.671		+1.339	
a, *a'*	+2.8		+6.4		+1.4		+6.5	
b, *b'*	0.00		+0.95		+0.03		+0.95	

Tag	729) τ Draconis AR.		729) τ Draconis Dekl.		728) α Sagittarii AR.		728) α Sagittarii Dekl.		730) δ Aquilae AR.		730) δ Aquilae Dekl.		733) ι Cygni AR.		733) ι Cygni Dekl.	
1933	$19^h\ 16^m$		+73° 13′		$19^h\ 19^m$		−40° 44′		$19^h\ 22^m$		+2° 58′		$19^h\ 27^m$		+51° 34′	
Jan. 1	45.77	8	49.78	343	13.692	147	47.55	132	6.232	102	39.28	136	58.824	25	66.32	325
11	45.69	7	46.35	345	13.839	195	46.23	132	6.334	138	37.92	133	58.849	88	63.07	329
21	45.76	21	42.90	336	14.034	238	44.91	131	6.472	172	36.59	124	58.937	150	59.78	319
31	45.97	35	39.54	313	14.272	276	43.60	128	6.644	200	35.35	109	59.087	208	56.59	297
Feb. 10	46.32	47	36.41	279	14.548	308	42.32	122	6.844	225	34.26	89	59.295	259	53.62	263
20	46.79	58	33.62	233	14.856	336	41.10	116	7.069	248	33.37	62	59.554	307	50.99	219
März 2	47.37	66	31.29	179	15.192	358	39.94	108	7.317	267	32.75	33	59.861	345	48.80	167
12	48.03	73	29.50	118	15.550	376	38.86	99	7.584	281	32.42	1	60.206	376	47.13	107
22	48.76	77	28.32	52	15.926	389	37.87	89	7.865	292	32.41	33	60.582	397	46.06	45
Apr. 1	49.53	78	27.80	13	16.315	397	36.98	77	8.157	301	32.74	65	60.979	409	45.61	19
11	50.31	78	27.93	77	16.712	399	36.21	63	8.458	303	33.39	96	61.388	411	45.80	82
21	51.09	74	28.70	139	17.111	398	35.58	47	8.761	302	34.35	122	61.799	402	46.62	142
Mai 1	51.83	68	30.09	196	17.509	388	35.11	31	9.063	295	35.57	146	62.201	384	48.04	195
11	52.51	61	32.05	243	17.897	372	34.80	12	9.358	283	37.03	163	62.585	356	49.99	242
21	53.12	51	34.48	285	18.269	348	34.68	8	9.641	264	38.66	174	62.941	318	52.41	281
31	53.63	40	37.33	316	18.617	318	34.76	28	9.905	240	40.40	182	63.259	275	55.22	312
Juni 10	54.03	28	40.49	340	18.935	279	35.04	47	10.145	210	42.22	183	63.534	222	58.34	333
20	54.31	16	43.89	353	19.214	235	35.51	66	10.355	176	44.05	178	63.756	165	61.67	346
30	54.47	2	47.42	357	19.449	184	36.17	82	10.531	137	45.83	171	63.921	103	65.13	349
Juli 10	54.49	11	50.99	353	19.633	130	36.99	94	10.668	95	47.54	159	64.024	40	68.62	344
19	54.38	23	54.52	341	19.763	73	37.93	104	10.763	52	49.13	144	64.064	23	72.06	331
29	54.15	35	57.93	320	19.836	15	38.97	109	10.815	8	50.57	126	64.041	86	75.37	311
Aug. 8	53.80	47	61.13	294	19.851	40	40.06	110	10.823	34	51.83	108	63.955	145	78.48	285
18	53.33	57	64.07	261	19.811	93	41.16	104	10.789	73	52.91	88	63.810	198	81.33	252
28	52.76	65	66.68	223	19.718	137	42.20	94	10.716	107	53.79	68	63.612	246	83.85	214
Sept. 7	52.11	73	68.91	179	19.581	173	43.14	80	10.609	133	54.47	47	63.366	284	85.99	172
17	51.38	78	70.70	132	19.408	200	43.94	60	10.476	153	54.94	27	63.082	311	87.71	126
27	50.60	81	72.02	81	19.208	213	44.54	38	10.323	162	55.21	7	62.771	329	88.97	77
Okt. 7	49.79	82	72.83	27	18.995	215	44.92	13	10.161	163	55.28	12	62.442	333	89.74	26
17	48.97	81	73.10	27	18.780	202	45.05	13	9.998	154	55.16	32	62.109	327	90.00	27
27	48.16	78	72.83	82	18.578	179	44.92	38	9.844	136	54.84	52	61.782	309	89.73	79
Nov. 6	47.38	72	72.01	136	18.399	143	44.54	62	9.708	110	54.32	70	61.473	278	88.94	131
16	46.66	64	70.65	189	18.256	99	43.92	84	9.598	78	53.62	88	61.195	240	87.63	180
26	46.02	55	68.76	235	18.157	50	43.08	101	9.520	42	52.74	103	60.955	192	85.83	225
Dez. 6	45.47	43	66.41	277	18.107	4	42.07	115	9.478	2	51.71	117	60.763	136	83.58	264
16	45.04	30	63.64	310	18.111	59	40.92	126	9.476	38	50.54	127	60.627	77	80.94	295
26	44.74	19	60.54	331	18.170	113	39.66	131	9.514	77	49.27	133	60.550	15	77.99	316
36	44.55		57.23		18.283		38.35		9.591		47.94		60.535		74.83	
Mittl. Ort	51.15		53.88		14.800		37.29		7.216		47.34		61.037		70.49	
sec δ, tg δ	3.466		+3.319		1.320		−0.861		1.001		+0.052		1.610		+1.261	
a, *a′*	−1.1		+6.6		+4.2		+6.8		+3.0		+7.0		+1.5		+7.5	
b, *b′*	+0.07		+0.94		−0.02		+0.94		0.00		+0.94		+0.03		+0.93	

Tag	732) β Cygni AR.	Δ	732) β Cygni Dekl.	Δ	736) *h* Sagittarii AR.	Δ	736) *h* Sagittarii Dekl.	Δ
1933	$19^h 27^m$		$+27° 48'$		$19^h 32^m$		$-25° 1'$	
Jan. 1	59.811	70	58.12	257	36.985	115	68.82	38
11	59.881	112	55.55	256	37.100	155	68.44	42
21	59.993	152	52.99	246	37.255	190	68.02	46
31	60.145	188	50.53	225	37.445	222	67.56	51
Feb. 10	60.333	221	48.28	195	37.667	250	67.05	56
20	60.554	249	46.33	157	37.917	274	66.49	63
März 2	60.803	274	44.76	112	38.191	295	65.86	70
12	61.077	293	43.64	62	38.486	312	65.16	76
22	61.370	308	43.02	10	38.798	325	64.40	82
Apr. 1	61.678	317	42.92	$\overline{43}$	39.123	335	63.58	87
11	61.995	320	43.35	94	39.458	340	62.71	89
21	62.315	318	44.29	141	39.798	341	61.82	88
Mai 1	62.633	308	45.70	183	40.139	335	60.94	85
11	62.941	293	47.53	220	40.474	325	60.09	79
21	63.234	270	49.73	247	40.799	307	59.30	69
31	63.504	241	52.20	269	41.106	283	58.61	58
Juni 10	63.745	206	54.89	281	41.389	252	58.03	44
20	63.951	167	57.70	287	41.641	216	57.59	30
30	64.118	124	60.57	286	41.857	173	57.29	15
Juli 10	64.242	77	63.43	277	42.030	128	57.14	0
19	64.319	29	66.20	262	42.158	80	57.14	13
29	64.348	$\overline{17}$	68.82	242	42.238	30	57.27	25
Aug. 8	64.331	62	71.24	217	42.268	$\overline{17}$	57.52	34
18	64.269	105	73.41	188	42.251	62	57.86	39
28	64.164	140	75.29	155	42.189	102	58.25	42
Sept. 7	64.024	169	76.84	121	42.087	134	58.67	42
17	63.855	191	78.05	84	41.953	157	59.09	37
27	63.664	202	78.89	45	41.796	171	59.46	31
Okt. 7	63.462	205	79.34	5	41.625	174	59.77	23
17	63.257	197	79.39	$\overline{36}$	41.451	165	60.00	13
27	63.060	180	79.03	76	41.286	147	60.13	3
Nov. 6	62.880	156	78.27	115	41.139	119	60.16	$\overline{6}$
16	62.724	123	77.12	151	41.020	85	60.10	16
26	62.601	86	75.61	185	40.935	45	59.94	23
Dez. 6	62.515	45	73.76	214	40.890	$\overline{1}$	59.71	29
16	62.470	2	71.62	236	40.889	43	59.42	34
26	62.468	$\overline{43}$	69.26	251	40.932	87	59.08	37
36	62.511		66.75		41.019		58.71	
Mittl. Ort	61.128		64.06		37.906		58.96	
sec δ, tg δ	1.131		+0.528		1.104		−0.467	
a, *a'*	+2.4		+7.5		+3.6		+7.9	
b, *b'*	+0.01		+0.93		−0.01		+0.92	

Tag	738) ϑ Cygni AR.	Δ	738) ϑ Cygni Dekl.	Δ	742) δ Cygni AR.	Δ	742) δ Cygni Dekl.	Δ
1933	$19^h 34^m$		$+50° 3'$		$19^h 42^m$		$+44° 57'$	
Jan. 1	36.544	20	50.48	319	51.018	22	55.22	306
11	36.564	80	47.29	324	51.040	76	52.16	311
21	36.644	140	44.05	316	51.116	130	49.05	303
31	36.784	195	40.89	295	51.246	179	46.02	285
Feb. 10	36.979	247	37.94	262	51.425	225	43.17	254
20	37.226	292	35.32	221	51.650	267	40.63	213
März 2	37.518	331	33.11	168	51.917	303	38.50	165
12	37.849	363	31.43	111	52.220	332	36.85	108
22	38.212	384	30.32	49	52.552	354	35.77	49
Apr. 1	38.596	398	29.83	$\overline{15}$	52.906	369	35.28	$\overline{12}$
11	38.994	402	29.98	77	53.275	374	35.40	73
21	39.396	395	30.75	136	53.649	372	36.13	131
Mai 1	39.791	380	32.11	190	54.021	360	37.44	183
11	40.171	354	34.01	237	54.381	340	39.27	229
21	40.525	320	36.38	277	54.721	312	41.56	268
31	40.845	278	39.15	308	55.033	275	44.24	299
Juni 10	41.123	228	42.23	331	55.308	232	47.23	320
20	41.351	174	45.54	343	55.540	183	50.43	334
30	41.525	115	48.97	348	55.723	130	53.77	338
Juli 10	41.640	54	52.45	344	55.853	74	57.15	335
19	41.694	$\overline{9}$	55.89	332	55.927	16	60.50	323
29	41.685	70	59.21	312	55.943	$\overline{40}$	63.73	306
Aug. 8	41.615	128	62.33	288	55.903	94	66.79	281
18	41.487	181	65.21	255	55.809	145	69.60	251
28	41.306	228	67.76	219	55.664	189	72.11	215
Sept. 7	41.078	265	69.95	177	55.475	225	74.26	176
17	40.813	295	71.72	133	55.250	253	76.02	132
27	40.518	312	73.05	84	54.997	271	77.34	86
Okt. 7	40.206	318	73.89	33	54.726	278	78.20	38
17	39.888	313	74.22	$\overline{18}$	54.448	274	78.58	$\overline{12}$
27	39.575	297	74.04	71	54.174	260	78.46	62
Nov. 6	39.278	269	73.33	122	53.914	235	77.84	112
16	39.009	232	72.11	171	53.679	202	76.72	160
26	38.777	187	70.40	216	53.477	162	75.12	203
Dez. 6	38.590	135	68.24	256	53.315	116	73.09	242
16	38.455	78	65.68	288	53.199	65	70.67	273
26	38.377	18	62.80	309	53.134	11	67.94	295
36	38.359		59.71		53.123		64.99	
Mittl. Ort	38.666		54.16		52.875		58.59	
sec δ, tg δ	1.558		+1.195		1.413		+0.999	
a, *a'*	+1.6		+8.0		+1.9		+8.7	
b, *b'*	+0.03		+0.92		+0.03		+0.90	

Scheinbare Sternörter 1933

Tag	741) γ Aquilae AR.		741) γ Aquilae Dekl.		743) δ Sagittae AR.		743) δ Sagittae Dekl.		745) α Aquilae[1] AR.		745) α Aquilae[1] Dekl.		747) ε Draconis AR.		747) ε Draconis Dekl.	
1933	$19^h\,43^m$		$+10°\,26'$		$19^h\,44^m$		$+18°\,21'$		$19^h\,47^m$		$+8°\,41'$		$19^h\,48^m$		$+70°\,5'$	
	s		"		s		"		s		"		s		"	
Jan. 1	3.425	75	48.83	170	22.871	65	58.34	209	29.841	76	17.56	158	20.04	12	49.15	329
11	3.500	111	47.13	168	22.936	104	56.25	209	29.917	112	15.98	156	19.92	1	45.86	340
21	3.611	145	45.45	161	23.040	139	54.16	201	30.029	145	14.42	148	19.91	$\overline{11}$	42.46	339
31	3.756	177	43.84	144	23.179	172	52.15	183	30.174	177	12.94	132	20.02	23	39.07	324
Feb. 10	3.933	205	42.40	121	23.351	203	50.32	158	30.351	205	11.62	109	20.25	34	35.83	297
20	4.138	230	41.19	93	23.554	230	48.74	126	30.556	230	10.53	82	20.59	44	32.86	258
März 2	4.368	253	40.26	58	23.784	254	47.48	86	30.786	252	9.71	49	21.03	53	30.28	208
12	4.621	271	39.68	20	24.038	275	46.62	44	31.038	271	9.22	12	21.56	59	28.20	152
22	4.892	286	39.48	$\overline{18}$	24.313	290	46.18	$\overline{1}$	31.309	286	9.10	$\overline{25}$	22.15	64	26.68	89
Apr. 1	5.178	297	39.66	57	24.603	302	46.19	47	31.595	297	9.35	62	22.79	67	25.79	24
11	5.475	304	40.23	95	24.905	309	46.66	92	31.892	304	9.97	98	23.46	68	25.55	$\overline{41}$
21	5.779	305	41.18	130	25.214	309	47.58	132	32.196	306	10.95	132	24.14	67	25.96	105
Mai 1	6.084	301	42.48	159	25.523	305	48.90	168	32.502	303	12.27	159	24.81	64	27.01	164
11	6.385	291	44.07	183	25.828	293	50.58	199	32.805	292	13.86	182	25.45	58	28.65	217
21	6.676	274	45.90	202	26.121	276	52.57	222	33.097	276	15.68	198	26.03	52	30.82	263
31	6.950	251	47.92	213	26.397	251	54.79	240	33.373	254	17.66	210	26.55	44	33.45	301
Juni 10	7.201	222	50.05	220	26.648	222	57.19	250	33.627	225	19.76	215	26.99	34	36.46	330
20	7.423	189	52.25	219	26.870	186	59.69	254	33.852	192	21.91	214	27.33	24	39.76	350
30	7.612	150	54.44	214	27.056	146	62.23	251	34.044	154	24.05	207	27.57	13	43.26	362
Juli 10	7.762	108	56.58	204	27.202	103	64.74	242	34.198	112	26.12	196	27.70	2	46.88	363
19	[18] 7.870	64	58.62	189	[18] 27.305	58	67.16	228	[19] 34.310	68	28.08	182	[19] 27.72	$\overline{9}$	50.51	358
29	7.934	20	60.51	171	27.363	12	69.44	209	34.378	24	29.90	164	27.63	20	54.09	344
Aug. 8	7.954	$\overline{24}$	62.22	151	27.375	$\overline{32}$	71.53	188	34.402	$\overline{20}$	31.54	143	27.43	30	57.53	323
18	7.930	64	63.73	127	27.343	73	73.41	162	34.382	60	32.97	120	27.13	39	60.76	294
28	7.866	100	65.00	103	27.270	109	75.03	134	34.322	95	34.17	97	26.74	48	63.70	260
Sept. 7	7.766	129	66.03	78	27.161	139	76.37	104	34.227	125	35.14	73	26.26	55	66.30	221
17	7.637	150	66.81	52	27.022	161	77.41	73	34.102	147	35.87	48	25.71	61	68.51	176
27	7.487	164	67.33	25	26.861	175	78.14	41	33.955	160	36.35	23	25.10	64	70.27	127
Okt. 7	7.323	168	67.58	$\overline{1}$	26.686	180	78.55	8	33.795	164	36.58	$\overline{2}$	24.46	66	71.54	75
17	7.155	162	67.57	27	26.506	174	78.63	$\overline{25}$	33.631	159	36.56	27	23.80	67	72.29	20
27	6.993	149	67.30	53	26.332	161	78.38	57	33.472	146	36.29	51	23.13	65	72.49	$\overline{36}$
Nov. 6	6.844	125	66.77	79	26.171	138	77.81	90	33.326	123	35.78	74	22.48	62	72.13	93
16	6.719	98	65.98	102	26.033	111	76.91	120	33.203	95	35.04	96	21.86	57	71.20	147
26	6.621	64	64.96	124	25.922	77	75.71	148	33.108	62	34.08	115	21.29	49	69.73	199
Dez. 6	6.557	27	63.72	142	25.845	39	74.23	172	33.046	25	32.93	133	20.80	41	67.74	246
16	6.530	$\overline{11}$	62.30	156	25.806	0	72.51	191	33.021	$\overline{13}$	31.60	146	20.39	30	65.28	284
26	6.541	51	60.74	166	25.806	40	70.60	203	33.034	51	30.14	154	20.09	20	62.44	314
36	6.592		59.08		25.846		68.57		33.085		28.60		19.89		59.30	
Mittl. Ort	4.453		55.55		24.002		64.19		30.847		24.40		24.57		50.08	
sec δ, tg δ	1.017		+0.184		1.054		+0.332		1.012		+0.153		2.938		+2.762	
a, *a'*	+2.9		+8.7		+2.7		+8.8		+2.9		+9.1		−0.2		+9.1	
b, *b'*	+0.01		+0.90		+0.01		+0.90		0.00		+0.89		+0.08		+0.89	

[1] Die jährliche Parallaxe (0."23) ist bereits berücksichtigt.

Tag	749) β Aquilae AR.		749) β Aquilae Dekl.		748) ε Pavonis AR.		748) ε Pavonis Dekl.	
1933	19h 52m		+6° 14′		19h 52m		−73° 5′	
Jan. 1	0.349	70	10.58	145	49.64	13	36.36	304
11	0.419	106	9.13	144	49.77	26	33.32	309
21	0.525	140	7.69	136	50.03	39	30.23	305
31	0.665	170	6.33	122	50.42	51	27.18	296
Feb. 10	0.835	199	5.11	101	50.93	61	24.22	278
20	1.034	224	4.10	74	51.54	70	21.44	256
März 2	1.258	247	3.36	44	52.24	77	18.88	227
12	1.505	266	2.92	9	53.01	84	16.61	196
22	1.771	282	2.83	26	53.85	89	14.65	160
Apr. 1	2.053	295	3.09	61	54.74	92	13.05	122
11	2.348	303	3.70	96	55.66	94	11.83	81
21	2.651	306	4.66	126	56.60	94	11.02	39
Mai 1	2.957	303	5.92	152	57.54	92	10.63	4
11	3.260	295	7.44	173	58.46	88	10.67	46
21	3.555	280	9.17	189	59.34	83	11.13	88
31	3.835	259	11.06	198	60.17	75	12.01	127
Juni 10	4.094	231	13.04	202	60.92	67	13.28	162
20	4.325	199	15.06	201	61.59	56	14.90	194
30	4.524	160	17.07	195	62.15	44	16.84	220
Juli 10	4.684	120	19.02	183	62.59	31	19.04	238
20	4.804	76	20.85	169	62.90	18	21.42	251
29	4.880	32	22.54	151	63.08	3	23.93	253
Aug. 8	4.912	12	24.05	131	63.11	11	26.46	248
18	4.900	53	25.36	110	63.00	25	28.94	233
28	4.847	89	26.46	88	62.75	36	31.27	209
Sept. 7	4.758	120	27.34	65	62.39	47	33.36	177
17	4.638	142	27.99	42	61.92	56	35.13	137
27	4.496	156	28.41	19	61.36	62	36.50	90
Okt. 7	4.340	162	28.60	4	60.74	64	37.40	40
17	4.178	158	28.56	26	60.10	64	37.80	14
27	4.020	145	28.30	48	59.46	61	37.66	69
Nov. 6	3.875	124	27.82	69	58.85	55	36.97	122
16	3.751	97	27.13	89	58.30	46	35.75	170
26	3.654	65	26.24	107	57.84	36	34.05	213
Dez. 6	3.589	29	25.17	122	57.48	24	31.92	250
16	3.560	9	23.95	135	57.24	10	29.42	278
26	3.569	46	22.60	142	57.14	3	26.64	297
36	3.615		21.18		57.17		23.67	
Mittl. Ort	1.320		17.42		52.40		23.76	
sec δ, tg δ	1.006		+0.109		3.438		−3.289	
a, a′	+2.9		+9.4		+6.9		+9.5	
b, b′	0.00		+0.88		−0.10		+0.88	

Tag	750) ψ Cygni AR.		750) ψ Cygni Dekl.		751) ϑ¹ Sagittarii AR.		751) ϑ¹ Sagittarii Dekl.	
1933	19h 53m		+52° 15′		19h 55m		−35° 27′	
Jan. 1	51.632	16	35.55	315	21.760	96	43.81	107
11	51.616	48	32.40	324	21.856	140	42.74	115
21	51.664	110	29.16	319	21.996	181	41.59	119
31	51.774	170	25.97	304	22.177	218	40.40	123
Feb. 10	51.944	227	22.93	276	22.395	251	39.17	124
20	52.171	279	20.17	237	22.646	281	37.93	126
März 2	52.450	323	17.80	188	22.927	307	36.67	126
12	52.773	362	15.92	132	23.234	329	35.41	123
22	53.135	390	14.60	71	23.563	348	34.18	120
Apr. 1	53.525	408	13.89	8	23.911	362	32.98	114
11	53.933	418	13.81	55	24.273	372	31.84	106
21	54.351	417	14.36	115	24.645	376	30.78	95
Mai 1	54.768	404	15.51	172	25.021	374	29.83	81
11	55.172	382	17.23	221	25.395	366	29.02	65
21	55.554	349	19.44	266	25.761	350	28.37	47
31	55.903	309	22.10	299	26.111	326	27.90	27
Juni 10	56.212	259	25.09	326	26.437	296	27.63	6
20	56.471	204	28.35	344	26.733	257	27.57	15
30	56.675	143	31.79	351	26.990	212	27.72	36
Juli 10	56.818	79	35.30	352	27.202	163	28.08	53
20	56.897	14	38.82	344	27.365	110	28.61	69
29	56.911	50	42.26	328	27.475	56	29.30	82
Aug. 8	56.861	112	45.54	305	27.531	1	30.12	89
18	56.749	169	48.59	277	27.532	50	31.01	94
28	56.580	221	51.36	242	27.482	96	31.95	91
Sept. 7	56.359	264	53.78	202	27.386	136	32.86	85
17	56.095	297	55.80	159	27.250	167	33.71	74
27	55.798	319	57.39	111	27.083	185	34.45	59
Okt. 7	55.479	332	58.50	60	26.898	194	35.04	40
17	55.147	330	59.10	9	26.704	191	35.44	20
27	54.817	319	59.19	44	26.513	175	35.64	2
Nov. 6	54.498	295	58.75	98	26.338	149	35.62	23
16	54.203	263	57.77	149	26.189	116	35.39	44
26	53.940	219	56.28	197	26.073	75	34.95	64
Dez. 6	53.721	170	54.31	240	25.998	29	34.31	79
16	53.551	114	51.91	276	25.969	17	33.52	93
26	53.437	53	49.15	302	25.986	65	32.59	104
36	53.384		46.13		26.051		31.55	
Mittl. Ort	53.882		37.29		22.681		32.79	
sec δ, tg δ	1.634		+1.292		1.228		−0.712	
a, a′	+1.6		+9.6		+3.9		+9.7	
b, b′	+0.04		+0.88		−0.02		+0.88	

Tag	752) γ Sagittae AR.		752) γ Sagittae Dekl.		754) δ Pavonis AR.		754) δ Pavonis Dekl.		756) ϑ Aquilae AR.		756) ϑ Aquilae Dekl.		759) κ Cephei AR.		759) κ Cephei Dekl.	
1933	19h 55m		+19° 18′		20h 2m		−66° 21′		20h 7m		−1° 1′		20h 11m		+77° 30′	
Jan. 1	45.486	53	27.34	209	8.39	10	31.92	272	50.026	62	24.55	99	3.36	36	39.65	310
11	45.539	91	25.25	210	8.49	20	29.20	280	50.088	96	25.54	96	3.00	18	36.55	329
21	45.630	127	23.15	203	8.69	28	26.40	282	50.184	129	26.50	88	2.82	1	33.26	334
31	45.757	161	21.12	187	8.97	37	23.58	275	50.313	160	27.38	75	2.83	20	29.92	329
Feb. 10	45.918	193	19.25	162	9.34	45	20.83	263	50.473	189	28.13	58	3.03	39	26.63	308
20	46.111	222	17.63	131	9.79	51	18.20	245	50.662	215	28.71	35	3.42	56	23.55	277
März 2	46.333	247	16.32	92	10.30	57	15.75	223	50.877	238	29.06	10	3.98	72	20.78	233
12	46.580	268	15.40	50	10.87	62	13.52	197	51.115	259	29.16	18	4.70	84	18.45	182
22	46.848	287	14.90	4	11.49	65	11.55	167	51.374	278	28.98	47	5.54	93	16.63	123
Apr. 1	47.135	301	14.86	42	12.14	68	9.88	134	51.652	292	28.51	76	6.47	100	15.40	61
11	47.436	309	15.28	87	12.82	70	8.54	98	51.944	302	27.75	102	7.47	102	14.79	4
21	47.745	312	16.15	129	13.52	70	7.56	60	52.246	309	26.73	127	8.49	102	14.83	67
Mai 1	48.057	309	17.44	166	14.22	70	6.96	21	52.555	309	25.46	147	9.51	98	15.50	128
11	48.366	300	19.10	198	14.92	67	6.75	18	52.864	303	23.99	161	10.49	91	16.78	184
21	48.666	283	21.08	224	15.59	64	6.93	58	53.167	292	22.38	172	11.40	81	18.62	233
31	48.949	260	23.32	242	16.23	59	7.51	95	53.459	272	20.66	177	12.21	70	20.95	276
Juni 10	49.209	231	25.74	253	16.82	53	8.46	131	53.731	248	18.89	177	12.91	55	23.71	311
20	49.440	196	28.27	259	17.35	46	9.77	163	53.979	216	17.12	171	13.46	40	26.82	337
30	49.636	157	30.86	257	17.81	37	11.40	189	54.195	180	15.41	163	13.86	24	30.19	354
Juli 10	49.793	113	33.43	249	18.18	28	13.29	212	54.375	140	13.78	150	14.10	6	33.73	363
20	49.906	68	35.92	236	18.46	17	15.41	225	54.515	96	12.28	135	14.16	10	37.36	363
29	[31] 49.974	23	38.28	218	[23] 18.63	7	17.66	233	[24] 54.611	52	10.93	118	[25] 14.06	27	40.99	356
Aug. 8	49.997	22	40.46	197	18.70	3	19.99	232	54.663	7	9.75	99	13.79	43	44.55	341
18	49.975	65	42.43	171	18.67	14	22.31	221	54.670	35	8.76	79	13.36	58	47.96	318
28	49.910	102	44.14	144	18.53	23	24.52	204	54.635	73	7.97	61	12.78	72	51.14	290
Sept. 7	49.808	133	45.58	114	18.30	31	26.56	176	54.562	105	7.36	42	12.06	84	54.04	254
17	49.675	157	46.72	83	17.99	37	28.32	143	54.457	129	6.94	24	11.22	93	56.58	214
27	49.518	172	47.55	50	17.62	42	29.75	101	54.328	147	6.70	8	10.29	101	58.72	169
Okt. 7	49.346	178	48.05	16	17.20	44	30.76	56	54.181	154	6.62	9	9.28	106	60.41	119
17	49.168	176	48.21	17	16.76	44	31.32	7	54.027	153	6.71	24	8.22	108	61.60	65
27	48.992	163	48.04	51	16.32	42	31.39	42	53.874	142	6.95	39	7.14	108	62.25	10
Nov. 6	48.829	144	47.53	83	15.90	39	30.97	92	53.732	124	7.34	52	6.06	105	62.35	48
16	48.685	118	46.70	115	15.51	32	30.05	138	53.608	98	7.86	65	5.01	98	61.87	104
26	48.567	85	45.55	144	15.19	24	28.67	180	53.510	69	8.51	76	4.03	89	60.83	159
Dez. 6	48.482	49	44.11	168	14.95	16	26.87	215	53.441	34	9.27	86	3.14	78	59.24	210
16	48.433	11	42.43	189	14.79	6	24.72	244	53.407	2	10.13	93	2.36	64	57.14	254
26	48.422	28	40.54	202	14.73	4	22.28	265	53.409	38	11.06	96	1.72	47	54.60	291
36	48.450		38.52		14.77		19.63		53.447		12.02		1.25		51.69	
Mittl. Ort	46.617		32.48		10.24		18.95		50.907		17.30		10.72		37.71	
sec δ, tg δ	1.060		+0.350		2.493		−2.284		1.000		−0.018		4.624		+4.515	
a, *a′*	+2.7		+9.7		+5.7		+10.2		+3.1		+10.6		−2.0		+10.9	
b, *b′*	+0.01		+0.88		−0.08		+ 0.86		0.00		+ 0.85		+0.16		+ 0.84	

Tag	757) o^1 Cygni sq. AR.		757) Dekl.		760) 24 Vulpeculae AR.		760) Dekl.		761) α^2 Capricorni AR.		761) Dekl.		765) γ Cygni AR.		765) Dekl.	
1933	20h 11m		+46° 31′		20h 13m		+24° 27′		20h 14m		−12° 45′		20h 19m		+40° 2′	
Jan. 1	29.407	19	73.47	294	53.860	28	45.60	224	19.522	63	22.12	28	47.777	9	28.00	274
11	29.388	36	70.53	305	53.888	67	43.36	228	19.585	99	22.40	23	47.768	38	25.26	284
21	29.424	89	67.48	305	53.955	105	41.08	223	19.684	133	22.63	14	47.806	85	22.42	284
31	29.513	142	64.43	291	54.060	142	38.85	210	19.817	164	22.77	3	47.891	131	19.58	271
Feb. 10	29.655	193	61.52	267	54.202	176	36.75	186	19.981	192	22.80	10	48.022	176	16.87	249
20	29.848	239	58.85	231	54.378	207	34.89	155	20.173	219	22.70	26	48.198	217	14.38	215
März 2	30.087	282	56.54	187	54.585	237	33.34	116	20.392	244	22.44	44	48.415	255	12.23	172
12	30.369	318	54.67	134	54.822	263	32.18	71	20.636	265	22.00	63	48.670	289	10.51	123
22	30.687	346	53.33	77	55.085	285	31.47	24	20.901	284	21.37	81	48.959	316	9.28	68
Apr. 1	31.033	369	52.56	16	55.370	302	31.23	25	21.185	300	20.56	99	49.275	338	8.60	10
11	31.402	382	52.40	45	55.672	314	31.48	74	21.485	311	19.57	114	49.613	352	8.50	47
21	31.784	385	52.85	104	55.986	320	32.22	119	21.796	319	18.43	126	49.965	358	8.97	103
Mai 1	32.169	381	53.89	159	56.306	320	33.41	162	22.115	321	17.17	135	50.323	357	10.00	156
11	32.550	365	55.48	209	56.626	312	35.03	199	22.436	317	15.82	139	50.680	346	11.56	203
21	32.915	342	57.57	251	56.938	297	37.02	229	22.753	306	14.43	139	51.026	327	13.59	243
31	33.257	309	60.08	287	57.235	275	39.31	253	23.059	288	13.04	136	51.353	300	16.02	277
Juni 10	33.566	268	62.95	314	57.510	246	41.84	268	23.347	263	11.68	127	51.653	266	18.79	302
20	33.834	221	66.09	332	57.756	212	44.52	278	23.610	233	10.41	115	51.919	224	21.81	318
30	34.055	168	69.41	342	57.968	172	47.30	279	23.843	196	9.26	102	52.143	177	24.99	328
Juli 10	34.223	112	72.83	344	58.140	129	50.09	275	24.039	156	8.24	86	52.320	127	28.27	329
20	34.335	53	76.27	338	58.269	82	52.84	265	24.195	111	7.38	69	52.447	73	31.56	322
29	[25] 34.388	5	79.65	324	[26] 58.351	35	55.49	248	[25] 24.306	64	6.69	51	[27] 52.520	19	34.78	310
Aug. 8	34.383	63	82.89	304	58.386	12	57.97	227	24.370	19	6.18	35	52.539	33	37.88	289
18	34.320	117	85.93	277	58.374	56	60.24	202	24.389	25	5.83	20	52.506	84	40.77	264
28	34.203	166	88.70	245	58.318	95	62.26	174	24.364	65	5.63	6	52.422	130	43.41	233
Sept. 7	34.037	206	91.15	208	58.223	130	64.00	142	24.299	99	5.57	6	52.292	168	45.74	198
17	33.831	240	93.23	167	58.093	156	65.42	109	24.200	127	5.63	14	52.124	200	47.72	159
27	33.591	264	94.90	122	57.937	175	66.51	74	24.073	145	5.77	22	51.924	222	49.31	117
Okt. 7	33.327	276	96.12	75	57.762	183	67.25	37	23.928	154	5.99	27	51.702	235	50.48	72
17	33.051	280	96.87	25	57.579	185	67.62	0	23.774	153	6.26	30	51.467	239	51.20	26
27	32.771	271	97.12	26	57.394	176	67.62	37	23.621	144	6.56	32	51.228	232	51.46	22
Nov. 6	32.500	253	96.86	78	57.218	159	67.25	75	23.477	125	6.88	33	50.996	216	51.24	70
16	32.247	227	96.08	128	57.059	136	66.50	111	23.352	100	7.21	33	50.780	192	50.54	117
26	32.020	191	94.80	174	56.923	106	65.39	143	23.252	70	7.54	34	50.588	162	49.37	161
Dez. 6	31.829	150	93.06	217	56.817	72	63.96	173	23.182	34	7.88	33	50.426	124	47.76	201
16	31.679	102	90.89	253	56.745	36	62.23	197	23.148	2	8.21	32	50.302	83	45.75	234
26	31.577	51	88.36	280	56.709	4	60.26	215	23.150	39	8.53	30	50.219	38	43.41	261
36	31.526		85.56		56.713		58.11		23.189		8.83		50.181		40.80	
Mittl. Ort	31.308		74.21		55.054		49.01		20.328		13.42		49.385		28.84	
sec δ, tg δ	1.454		+1.055		1.099		+0.455		1.025		−0.226		1.306		+0.840	
a, a'	+1.9		+10.9		+2.6		+11.1		+3.3		+11.1		+2.2		+11.5	
b, b'	+0.04		+ 0.84		+0.02		+ 0.83		−0.01		+ 0.83		+0.03		+ 0.82	

Tag	764) α Pavonis AR.	Diff.	764) α Pavonis Dekl.	Diff.	767) ϑ Cephei AR.	Diff.	767) ϑ Cephei Dekl.	Diff.
1933	20h 20m		−56° 56′		20h 28m		+62° 45′	
Jan. 1	20.350	60	78.34	229	24.49	14	69.09	303
11	20.410	129	76.05	242	24.35	5	66.06	323
21	20.539	193	73.63	248	24.30	4	62.83	330
31	20.732	253	71.15	249	24.34	12	59.53	324
Feb. 10	20.985	308	68.66	245	24.46	20	56.29	306
20	21.293	358	66.21	236	24.66	28	53.23	274
März 2	21.651	402	63.85	222	24.94	35	50.49	233
12	22.053	441	61.63	205	25.29	42	48.16	182
22	22.494	474	59.58	184	25.71	46	46.34	124
Apr. 1	22.968	499	57.74	159	26.17	50	45.10	62
11	23.467	518	56.15	131	26.67	53	44.48	3
21	23.985	528	54.84	101	27.20	53	44.51	66
Mai 1	24.513	530	53.83	69	27.73	53	45.17	127
11	25.043	521	53.14	34	28.26	50	46.44	184
21	25.564	502	52.80	2	28.76	47	48.28	234
31	26.066	472	52.82	37	29.23	42	50.62	277
Juni 10	26.538	430	53.19	71	29.65	36	53.39	312
20	26.968	379	53.90	103	30.01	30	56.51	339
30	27.347	318	54.93	133	30.31	21	59.90	358
Juli 10	27.665	248	56.26	157	30.52	13	63.48	366
20	27.913	174	57.83	177	30.65	5	67.14	368
29*)	[27] 28.087	96	59.60	190	[29] 30.70	3	70.82	360
Aug. 8	28.183	16	61.50	196	30.67	11	74.42	345
18	28.199	61	63.46	194	30.56	19	77.87	323
28	28.138	132	65.40	184	30.37	26	81.10	294
Sept. 7	28.006	196	67.24	167	30.11	33	84.04	260
17	27.810	247	68.91	142	29.78	38	86.64	219
27	27.563	285	70.33	110	29.40	42	88.83	174
Okt. 7	27.278	307	71.43	74	28.98	44	90.57	124
17	26.971	313	72.17	33	28.54	46	91.81	71
27	26.658	301	72.50	10	28.08	45	92.52	15
Nov. 6	26.357	274	72.40	54	27.63	44	92.67	41
16	26.083	234	71.86	95	27.19	42	92.26	98
26	25.849	182	70.91	134	26.77	37	91.28	152
Dez. 6	25.667	121	69.57	167	26.40	31	89.76	203
16	25.546	55	67.90	197	26.09	25	87.73	247
26	25.491	14	65.93	220	25.84	19	85.26	284
36	25.505		63.73		25.65		82.42	
Mittl. Ort	21.553		64.98		27.64		66.47	
sec δ, tg δ	1.834		−1.537		2.186		+1.943	
a, a′	+4.8		+11.5		+1.0		+12.1	
b, b′	−0.06		+ 0.82		+0.08		+ 0.80	

Tag	768) ε Delphini AR.	Diff.	768) ε Delphini Dekl.	Diff.	770) 73 Draconis AR.	Diff.	770) 73 Draconis Dekl.	Diff.
1933	20h 29m		+11° 4′		20h 32m		+74° 43′	
Jan. 1	59.776	30	23.13	156	18.95	34	35.19	297
11	59.806	65	21.57	158	18.61	20	32.22	320
21	59.871	98	19.99	152	18.41	4	29.02	333
31	59.969	131	18.47	139	18.37	11	25.69	330
Feb. 10	60.100	163	17.08	119	18.48	27	22.39	316
20	60.263	191	15.89	94	18.75	41	19.23	289
März 2	60.454	218	14.95	62	19.16	54	16.34	250
12	60.672	244	14.33	26	19.70	65	13.84	201
22	60.916	266	14.07	11	20.35	75	11.83	145
Apr. 1	61.182	284	14.18	51	21.10	81	10.38	84
11	61.466	299	14.69	88	21.91	85	9.54	21
21	61.765	308	15.57	123	22.76	86	9.33	44
Mai 1	62.073	311	16.80	156	23.62	85	9.77	106
11	62.384	308	18.36	181	24.47	80	10.83	164
21	62.692	298	20.17	203	25.27	73	12.47	217
31	62.990	281	22.20	218	26.00	65	14.64	262
Juni 10	63.271	257	24.38	227	26.65	54	17.26	301
20	63.528	228	26.65	229	27.19	43	20.27	330
30	63.756	191	28.94	227	27.62	29	23.57	353
Juli 10	63.947	152	31.21	218	27.91	15	27.10	365
20	64.099	108	33.39	206	28.06	2	30.75	370
29*)	[30] 64.207	63	35.45	189	[30] 28.08	12	34.45	366
Aug. 8	64.270	19	37.34	169	27.96	26	38.11	355
18	64.289	24	39.03	147	27.70	39	41.66	336
28	64.265	63	40.50	123	27.31	50	45.02	310
Sept. 7	64.202	98	41.73	97	26.81	61	48.12	278
17	64.104	125	42.70	72	26.20	70	50.90	240
27	63.979	145	43.42	46	25.50	77	53.30	196
Okt. 7	63.834	155	43.88	19	24.73	83	55.26	148
17	63.679	158	44.07	7	23.90	85	56.74	95
27	63.521	152	44.00	33	23.05	86	57.69	40
Nov. 6	63.369	137	43.67	58	22.19	84	58.09	18
16	63.232	117	43.09	83	21.35	80	57.91	77
26	63.115	90	42.26	104	20.55	74	57.14	133
Dez. 6	63.025	60	41.22	124	19.81	66	55.81	187
16	62.965	27	39.98	139	19.15	55	53.94	235
26	62.938	7	38.59	151	18.60	42	51.59	275
36	62.945		37.08		18.18		48.84	
Mittl. Ort	60.721		27.75		24.82		31.16	
sec δ, tg δ	1.019		+0.196		3.796		+3.662	
a, a′	+2.9		+12.2		−0.8		+12.4	
b, b′	+0.01		+ 0.79		+0.15		+ 0.79	

*) Bei Stern 768) und 770) lies Juli 30

Tag	769) α Indi				771) β Delphini				773) υ Capricorni				774) α Delphini			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$20^h\ 32^m$		$-47°\ 31'$		$20^h\ 34^m$		$+14°\ 21'$		$20^h\ 36^m$		$-18°\ 22'$		$20^h\ 36^m$		$+15°\ 40'$	
Jan. 1	50.760	46	49.03	179	23.443	23	35.56	170	13.563	44	42.20	9	30.568	20	24.87	175
11	50.806	100	47.24	193	23.466	58	33.86	173	13.607	80	42.11	18	30.588	54	23.12	179
21	50.906	150	45.31	203	23.524	91	32.13	168	13.687	114	41.93	27	30.642	88	21.33	174
31	51.056	197	43.28	209	23.615	125	30.45	156	13.801	146	41.66	39	30.730	122	19.59	163
Feb. 10	51.253	241	41.19	210	23.740	157	28.89	137	13.947	177	41.27	51	30.852	154	17.96	143
20	51.494	282	39.09	209	23.897	187	27.52	110	14.124	206	40.76	65	31.006	186	16.53	116
März 2	51.776	319	37.00	204	24.084	216	26.42	77	14.330	232	40.11	80	31.192	214	15.37	83
12	52.095	353	34.96	194	24.300	242	25.65	40	14.562	257	39.31	95	31.406	241	14.54	46
22	52.448	381	33.02	183	24.542	265	25.25	0	14.819	279	38.36	108	31.647	265	14.08	4
Apr. 1	52.829	405	31.19	167	24.807	285	25.25	41	15.098	299	37.28	121	31.912	284	14.04	37
11	53.234	424	29.52	148	25.092	300	25.66	83	15.397	315	36.07	131	32.196	300	14.41	79
21	53.658	437	28.04	126	25.392	310	26.49	120	15.712	325	34.76	137	32.496	311	15.20	119
Mai 1	54.095	442	26.78	101	25.702	313	27.69	154	16.037	331	33.39	141	32.807	314	16.39	154
11	54.537	439	25.77	73	26.015	310	29.23	185	16.368	330	31.98	139	33.121	312	17.93	185
21	54.976	426	25.04	44	26.325	301	31.08	208	16.698	323	30.59	134	33.433	302	19.78	211
31	55.402	406	24.60	12	26.626	284	33.16	226	17.021	307	29.25	126	33.735	286	21.89	228
Juni 10	55.808	374	24.48	18	26.910	260	35.42	238	17.328	286	27.99	113	34.021	261	24.17	242
20	56.182	335	24.66	49	27.170	230	37.80	242	17.614	256	26.86	97	34.282	232	26.59	247
30	56.517	286	25.15	78	27.400	195	40.22	241	17.870	222	25.89	80	34.514	196	29.06	248
Juli 10	56.803	230	25.93	103	27.595	154	42.63	235	18.092	180	25.09	61	34.710	155	31.54	241
20	57.033	170	26.96	125	27.749	111	44.98	223	18.272	136	24.48	42	34.865	111	33.95	230
30	57.203	106	28.21	143	27.860	65	47.21	207	18.408	89	24.06	23	34.976	67	36.25	214
Aug. 8	(31) 57.309	41	29.64	153	(31) 27.925	20	49.28	187	(31) 18.497	41	23.83	5	(31) 35.043	21	38.39	194
18	57.350	24	31.17	158	27.945	23	51.15	165	18.538	5	23.78	10	35.064	22	40.33	172
28	57.326	83	32.75	156	27.922	63	52.80	140	18.533	48	23.88	23	35.042	63	42.05	147
Sept. 7	57.243	136	34.31	146	27.859	97	54.20	113	18.485	86	24.11	32	34.979	97	43.52	120
17	57.107	180	35.77	130	27.762	126	55.33	86	18.399	116	24.43	39	34.882	126	44.72	92
27	56.927	213	37.07	108	27.636	145	56.19	57	18.283	139	24.82	42	34.756	146	45.64	62
Okt. 7	56.714	233	38.15	80	27.491	158	56.76	28	18.144	152	25.24	42	34.610	159	46.26	33
17	56.481	238	38.95	49	27.333	161	57.04	0	17.992	155	25.66	39	34.451	162	46.59	2
27	56.243	232	39.44	14	27.172	155	57.04	29	17.837	149	26.05	35	34.289	157	46.61	27
Nov. 6	56.011	213	39.58	22	27.017	142	56.75	58	17.688	134	26.40	30	34.132	145	46.34	57
16	55.798	181	39.36	56	26.875	123	56.17	85	17.554	112	26.70	24	33.987	125	45.77	85
26	55.617	141	38.80	90	26.752	96	55.32	110	17.442	84	26.94	17	33.862	99	44.92	111
Dez. 6	55.476	95	37.90	120	26.656	67	54.22	131	17.358	51	27.11	10	33.763	70	43.81	135
16	55.381	43	36.70	147	26.589	34	52.91	151	17.307	17	27.21	2	33.693	38	42.46	154
26	55.338	10	35.23	168	26.555	0	51.40	163	17.290	20	27.23	5	33.655	4	40.92	168
36	55.348		33.55		26.555		49.77		17.310		27.18		33.651		39.24	
Mittl. Ort	51.657		35.99		24.421		39.42		14.287		32.85		31.559		28.39	
sec δ, tg δ	1.481		−1.092		1.032		+0.256		1.054		−0.332		1.039		+0.281	
a, *a'*	+4.2		+12.4		+2.8		+12.5		+3.4		+12.6		+2.8		+12.7	
b, *b'*	−0.05		+0.79		+0.01		+0.78		−0.01		+0.78		+0.01		+0.78	

Tag	775) β Pavonis AR.		775) β Pavonis Dekl.		777) α Cygni AR.		777) α Cygni Dekl.		780) ε Cygni AR.		780) ε Cygni Dekl.		783) η Cephei AR.		783) η Cephei Dekl.	
1933	20h 38m		−66° 26′		20h 39m		+45° 2′		20h 43m		+33° 42′		20h 43m		+61° 34′	
Jan. 1	55.13	0	59.78	271	7.068	46	25.74	273	28.636	18	66.22	240	52.84	15	45.05	289
11	55.13	10	57.07	289	7.022	3	23.01	289	28.618	24	63.82	252	52.69	7	42.16	311
21	55.23	18	54.18	298	7.025	54	20.12	294	28.642	65	61.30	254	52.62	1	39.05	322
31	55.41	27	51.20	300	7.079	105	17.18	287	28.707	106	58.76	245	52.63	9	35.83	320
Feb. 10	55.68	35	48.20	295	7.184	156	14.31	267	28.813	146	56.31	226	52.72	16	32.63	305
20	56.03	42	45.25	285	7.340	203	11.64	238	28.959	186	54.05	198	52.88	25	29.58	278
März 2	56.45	49	42.40	268	7.543	248	9.26	197	29.145	223	52.07	159	53.13	32	26.80	239
12	56.94	55	39.72	246	7.791	288	7.29	150	29.368	256	50.48	115	53.45	38	24.41	191
22	57.49	60	37.26	220	8.079	323	5.79	95	29.624	285	49.33	65	53.83	43	22.50	135
Apr. 1	58.09	63	35.06	189	8.402	349	4.84	37	29.909	310	48.68	12	54.26	48	21.15	74
11	58.72	67	33.17	156	8.751	370	4.47	22	30.219	328	48.56	42	54.74	51	20.41	11
21	59.39	69	31.61	117	9.121	380	4.69	80	30.547	340	48.98	94	55.25	52	20.30	52
Mai 1	60.08	69	30.44	78	9.501	382	5.49	137	30.887	344	49.92	144	55.77	51	20.82	114
11	60.77	69	29.66	37	9.883	374	6.86	187	31.231	339	51.36	189	56.28	50	21.96	171
21	61.46	66	29.29	5	10.257	357	8.73	232	31.570	328	53.25	227	56.78	48	23.67	222
31	62.12	62	29.34	48	10.614	330	11.05	270	31.898	307	55.52	260	57.26	43	25.89	268
Juni 10	62.74	58	29.82	88	10.944	295	13.75	301	32.205	279	58.12	284	57.69	37	28.57	306
20	63.32	51	30.70	126	11.239	252	16.76	322	32.484	244	60.96	301	58.06	32	31.63	334
30	63.83	43	31.96	160	11.491	204	19.98	336	32.728	203	63.97	311	58.38	24	34.97	355
Juli 10	64.26	35	33.56	190	11.695	151	23.34	343	32.931	157	67.08	313	58.62	17	38.52	368
20	64.61	25	35.46	212	11.846	94	26.77	340	33.088	109	70.21	307	58.79	9	42.20	370
30	64.86	14	37.58	228	11.940	36	30.17	331	33.197	58	73.28	296	58.88	0	45.90	367
Aug. 8	65.00	4	39.86	235	11.976	20	33.48	314	33.255	8	76.24	279	58.88	8	49.57	354
18	65.04	7	42.21	233	11.956	75	36.62	291	33.263	41	79.03	255	58.80	15	53.11	335
28	64.97	17	44.54	224	11.881	125	39.53	263	33.222	84	81.58	228	58.65	22	56.46	308
Sept. 7	64.80	25	46.78	203	11.756	169	42.16	230	33.138	125	83.86	197	58.43	28	59.54	276
17	64.55	34	48.81	176	11.587	205	44.46	191	33.013	156	85.83	161	58.15	33	62.30	237
27	64.21	39	50.57	140	11.382	232	46.37	149	32.857	180	87.44	123	57.82	38	64.67	194
Okt. 7	63.82	43	51.97	97	11.150	251	47.86	103	32.677	197	88.67	82	57.44	41	66.61	145
17	63.39	45	52.94	50	10.899	259	48.89	55	32.480	202	89.49	40	57.03	42	68.06	94
27	62.94	44	53.44	1	10.640	258	49.44	5	32.278	201	89.89	4	56.61	43	69.00	38
Nov. 6	62.50	42	53.43	52	10.382	245	49.49	45	32.077	189	89.85	47	56.18	42	69.38	18
16	62.08	37	52.91	103	10.137	226	49.04	95	31.888	171	89.38	91	55.76	40	69.20	75
26	61.71	32	51.88	150	9.911	197	48.09	143	31.717	146	88.47	131	55.36	36	68.45	130
Dez. 6	61.39	24	50.38	192	9.714	162	46.66	188	31.571	116	87.16	169	55.00	31	67.15	182
16	61.15	15	48.46	229	9.552	121	44.78	226	31.455	80	85.47	202	54.69	26	65.33	229
26	61.00	6	46.17	258	9.431	76	42.52	257	31.375	42	83.45	227	54.43	19	63.04	268
36	60.94		43.59		9.355		39.95		31.333		81.18		54.24		60.36	
Mittl. Ort	56.63		45.18		8.835		24.29		29.983		66.19		55.80		41.02	
sec δ, tg δ	2.502		−2.294		1.415		+1.001		1.202		+0.667		2.101		+1.848	
a, a′	+5.4		+12.8		+2.0		+12.8		+2.4		+13.1		+1.2		+13.1	
b, b′	−0.10		+ 0.77		+0.04		+ 0.77		+0.03		+ 0.76		+0.08		+ 0.75	

Tag	781) ε Aquarii AR.		781) ε Aquarii Dekl.		784) λ Cygni AR.		784) λ Cygni Dekl.	
1933	20h 44m		−9° 44′		20h 44m		+36° 14′	
Jan. 1	2.300	34	39.48	40	46.451	26	37.97	248
11	2.334	67	39.88	34	46.425	16	35.49	261
21	2.401	99	40.22	25	46.441	60	32.88	264
31	2.500	131	40.47	13	46.501	103	30.24	256
Feb. 10	2.631	160	40.60	3	46.604	145	27.68	237
20	2.791	189	40.57	21	46.749	186	25.31	208
März 2	2.980	216	40.36	40	46.935	224	23.23	171
12	3.196	241	39.96	62	47.159	259	21.52	125
22	3.437	265	39.34	84	47.418	289	20.27	74
Apr. 1	3.702	284	38.50	104	47.707	316	19.53	20
11	3.986	300	37.46	122	48.023	334	19.33	35
21	4.286	313	36.24	138	48.357	346	19.68	88
Mai 1	4.599	319	34.86	150	48.703	350	20.56	140
11	4.918	320	33.36	158	49.053	346	21.96	187
21	5.238	312	31.78	161	49.399	333	23.83	227
31	5.550	300	30.17	158	49.732	312	26.10	261
Juni 10	5.850	279	28.59	153	50.044	283	28.71	286
20	6.129	251	27.06	142	50.327	246	31.57	306
30	6.380	217	25.64	128	50.573	205	34.63	316
Juli 10	6.597	179	24.36	113	50.778	158	37.79	320
20	6.776	136	23.23	95	50.936	108	40.99	315
30	6.912	91	22.28	76	51.044	56	44.14	305
Aug. 8	7.003	45	21.52	56	51.100	5	47.19	288
18	7.048	1	20.96	38	51.105	45	50.07	265
28	7.049	41	20.58	22	51.060	91	52.72	237
Sept. 7	7.008	78	20.36	6	50.969	130	55.09	205
17	6.930	107	20.30	7	50.839	164	57.14	170
27	6.823	130	20.37	17	50.675	189	58.84	130
Okt. 7	6.693	143	20.54	26	50.486	205	60.14	89
17	6.550	147	20.80	32	50.281	213	61.03	45
27	6.403	143	21.12	38	50.068	211	61.48	0
Nov. 6	6.260	130	21.50	41	49.857	200	61.48	45
16	6.130	110	21.91	43	49.657	182	61.03	91
26	6.020	85	22.34	45	49.475	156	60.12	133
Dez. 6	5.935	55	22.79	46	49.319	126	58.79	172
16	5.880	23	23.25	44	49.193	90	57.07	207
26	5.857	11	23.69	42	49.103	52	55.00	234
36	5.868		24.11		49.051		52.66	
Mittl. Ort	3.027		31.67		47.869		37.42	
sec δ, tg δ	1.015		−0.172		1.240		+0.733	
a, *a′*	+3.2		+13.2		+2.3		+13.2	
b, *b′*	−0.01		+ 0.75		+0.03		+ 0.75	

Tag	785) β Indi AR.		785) β Indi Dekl.		786) 32 Vulpeculae AR.		786) 32 Vulpeculae Dekl.	
1933	20h 49m		−58° 42′		20h 51m		+27° 47′	
Jan. 1	34.108	2	44.90	234	41.055	13	66.38	217
11	34.110	71	42.56	252	41.042	24	64.21	227
21	34.181	139	40.04	265	41.066	61	61.94	228
31	34.320	203	37.39	271	41.127	100	59.66	219
Feb. 10	34.523	264	34.68	271	41.227	137	57.47	202
20	34.787	320	31.97	267	41.364	173	55.45	174
März 2	35.107	371	29.30	257	41.537	208	53.71	140
12	35.478	418	26.73	242	41.745	240	52.31	97
22	35.896	458	24.31	222	41.985	268	51.34	50
Apr. 1	36.354	493	22.09	198	42.253	292	50.84	2
11	36.847	520	20.11	171	42.545	312	50.82	49
21	37.367	540	18.40	139	42.857	325	51.31	97
Mai 1	37.907	548	17.01	105	43.182	331	52.28	142
11	38.455	548	15.96	69	43.513	329	53.70	184
21	39.003	535	15.27	31	43.842	320	55.54	219
31	39.538	512	14.96	9	44.162	303	57.73	248
Juni 10	40.050	475	15.05	48	44.465	279	60.21	270
20	40.525	428	15.53	84	44.744	246	62.91	284
30	40.953	369	16.37	118	44.990	209	65.75	292
Juli 10	41.322	301	17.55	149	45.199	166	68.67	292
20	41.623	227	19.04	175	45.365	121	71.59	286
30	41.850	145	20.79	193	45.486	72	74.45	274
Aug. 8	41.995	63	22.72	205	45.558	24	77.19	256
18	42.058	20	24.77	210	45.582	22	79.75	234
28	42.038	98	26.87	204	45.560	65	82.09	208
Sept. 7	41.940	170	28.91	192	45.495	104	84.17	178
17	41.770	230	30.83	170	45.391	135	85.95	145
27	41.540	278	32.53	142	45.256	159	87.40	110
Okt. 7	41.262	311	33.95	106	45.097	175	88.50	73
17	40.951	326	35.01	65	44.922	182	89.23	34
27	40.625	326	35.66	21	44.740	181	89.57	5
Nov. 6	40.299	308	35.87	25	44.559	170	89.52	44
16	39.991	275	35.62	70	44.389	155	89.08	83
26	39.716	230	34.92	114	44.234	131	88.25	120
Dez. 6	39.486	174	33.78	155	44.103	104	87.05	153
16	39.312	111	32.23	189	43.999	71	85.52	182
26	39.201	45	30.34	219	43.928	36	83.70	205
36	39.156		28.15		43.892		81.65	
Mittl. Ort	35.148		30.38		42.229		66.81	
sec δ, tg δ	1.925		−1.645		1.131		+0.527	
a, *a′*	+4.7		+13.5		+2.6		+13.7	
b, *b′*	−0.07		+ 0.74		+0.02		+ 0.73	

Scheinbare Sternörter 1933

Tag	788) ν Cygni AR.		788) ν Cygni Dekl.		790) ζ Microscopii AR.		790) ζ Microscopii Dekl.		793) 61 Cygni pr.[1] AR.		793) 61 Cygni pr.[1] Dekl.		794) ν Aquarii AR.		794) ν Aquarii Dekl.	
1933	20h 54m		+40° 54′		20h 58m		−38° 53′		21h 3m		+38° 24′		21h 5m		−11° 38′	
Jan. 1	38.913	49	32.06	253	40.717	17	52.70	126	52.061	37	70.76	233	56.162	14	46.16	27
11	38.864	4	29.53	271	40.734	61	51.44	144	52.024	5	68.43	250	56.176	47	46.43	19
21	38.860	41	26.82	276	40.795	103	50.00	159	52.029	48	65.93	256	56.223	78	46.62	8
31	38.901	88	24.06	272	40.898	143	48.41	170	52.077	92	63.37	251	56.301	109	46.70	6
Feb. 10	38.989	134	21.34	255	41.041	182	46.71	179	52.169	137	60.86	236	56.410	140	46.64	21
20	39.123	179	18.79	228	41.223	218	44.92	186	52.306	179	58.50	209	56.550	170	46.43	38
März 2	39.302	222	16.51	191	41.441	253	43.06	188	52.485	221	56.41	173	56.720	199	46.05	57
12	39.524	262	14.60	146	41.694	285	41.18	189	52.706	260	54.68	130	56.919	226	45.48	78
22	39.786	296	13.14	94	41.979	315	39.29	186	52.966	294	53.38	80	57.145	251	44.70	98
Apr. 1	40.082	325	12.20	40	42.294	341	37.43	180	53.260	324	52.58	26	57.396	275	43.72	117
11	40.407	347	11.80	17	42.635	362	35.63	170	53.584	345	52.32	29	57.671	294	42.55	134
21	40.754	362	11.97	74	42.997	380	33.93	157	53.929	362	52.61	84	57.965	310	41.21	148
Mai 1	41.116	367	12.71	127	43.377	389	32.36	140	54.291	368	53.45	136	58.275	321	39.73	158
11	41.483	364	13.98	177	43.766	393	30.96	120	54.659	367	54.81	184	58.596	324	38.15	164
21	41.847	352	15.75	222	44.159	387	29.76	96	55.026	357	56.65	228	58.920	321	36.51	166
31	42.199	330	17.97	259	44.546	374	28.80	69	55.383	337	58.93	264	59.241	311	34.85	162
Juni 10	42.529	300	20.56	289	44.920	351	28.11	42	55.720	310	61.57	294	59.552	293	33.23	154
20	42.829	263	23.45	311	45.271	321	27.69	12	56.030	275	64.51	315	59.845	268	31.69	142
30	43.092	219	26.56	325	45.592	281	27.57	17	56.305	233	67.66	328	60.113	236	30.27	127
Juli 10	43.311	170	29.81	332	45.873	235	27.74	44	56.538	186	70.94	335	60.349	200	29.00	110
20	43.481	118	33.13	331	46.108	184	28.18	69	56.724	136	74.29	333	60.549	158	27.90	90
30	43.599	63	36.44	323	46.292	128	28.87	92	56.860	84	77.62	325	60.707	112	27.00	70
Aug. 8	43.662	9	39.67	308	46.420	71	29.79	109	56.944	30	80.87	310	60.819	67	26.30	49
18	43.671	43	42.75	287	46.491	14	30.88	121	56.974	20	83.97	289	60.886	21	25.81	30
28	43.628	91	45.62	259	46.505	40	32.09	127	56.954	68	86.86	263	60.907	21	25.51	12
Sept. 7	43.537	135	48.21	229	46.465	89	33.36	128	56.886	110	89.49	232	60.886	60	25.39	3
17	43.402	171	50.50	193	46.376	130	34.64	122	56.776	146	91.81	197	60.826	92	25.42	16
27	43.231	199	52.43	153	46.246	162	35.86	109	56.630	174	93.78	158	60.734	118	25.58	26
Okt. 7	43.032	219	53.96	109	46.084	184	36.95	92	56.456	194	95.36	117	60.616	134	25.84	35
17	42.813	229	55.05	64	45.900	194	37.87	69	56.262	203	96.53	73	60.482	142	26.19	39
27	42.584	229	55.69	17	45.706	194	38.56	44	56.059	206	97.26	27	60.340	142	26.58	42
Nov. 6	42.355	222	55.86	31	45.512	181	39.00	16	55.853	198	97.53	20	60.198	132	27.00	43
16	42.133	204	55.55	79	45.331	160	39.16	12	55.655	183	97.33	65	60.066	116	27.43	43
26	41.929	182	54.76	125	45.171	130	39.04	41	55.472	161	96.68	110	59.950	95	27.86	41
Dez. 6	41.747	150	53.51	169	45.041	94	38.63	69	55.311	133	95.58	151	59.855	68	28.27	39
16	41.597	115	51.82	206	44.947	54	37.94	93	55.178	99	94.07	188	59.787	38	28.66	35
26	41.482	76	49.76	238	44.893	12	37.01	116	55.079	62	92.19	218	59.749	7	29.01	29
36	41.406		47.38		44.881		35.85		55.017		90.01		59.742		29.30	
Mittl. Ort	40.462		29.97		41.380		40.15		53.502		68.60		56.800		38.40	
sec δ, tg δ	1.323		+0.867		1.285		−0.807		1.276		+0.793		1.021		−0.206	
a, *a′*	+2.2		+13.8		+3.8		+14.1		+2.3		+14.4		+3.3		+14.5	
b, *b′*	+0.04		+ 0.72		−0.04		+ 0.71		+0.04		+ 0.70		−0.01		+ 0.69	

[1]) Die jährliche Parallaxe (0.″30) ist bereits berücksichtigt.

Tag	795) Br 2777				797) ζ Cygni				800) α Equulei				803) α Cephei			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$21^h\,6^m$		$+77^\circ\,50'$		$21^h\,10^m$		$+29^\circ\,56'$		$21^h\,12^m$		$+4^\circ\,58'$		$21^h\,16^m$		$+62^\circ\,17'$	
Jan. 1	$45.^s27$	58	$86.''28$	264	$3.^s851$	34	$65.''57$	213	$27.^s766$	1	$7.''36$	111	$56.^s02$	20	$71.''70$	263
11	44.69	42	83.64	296	3.817	2	63.44	227	27.765	30	6.25	112	55.82	14	69.07	293
21	44.27	23	80.68	318	3.819	39	61.17	231	27.795	61	5.13	106	55.68	6	66.14	311
31	44.04	3	77.50	327	3.858	78	58.86	226	27.856	93	4.07	95	55.62	2	63.03	318
Feb. 10	44.01	16	74.23	323	3.936	117	56.60	211	27.949	123	3.12	78	55.64	11	59.85	312
20	44.17	36	71.00	305	4.053	155	54.49	186	28.072	153	2.34	57	55.75	19	56.73	292
März 2	44.53	54	67.95	276	4.208	192	52.63	153	28.225	184	1.77	31	55.94	27	53.81	262
12	45.07	69	65.19	235	4.400	227	51.10	112	28.409	213	1.46	0	56.21	34	51.19	219
22	45.76	83	62.84	185	4.627	259	49.98	67	28.622	239	1.46	32	56.55	40	49.00	170
Apr. 1	46.59	94	60.99	129	4.886	287	49.31	18	28.861	263	1.78	64	56.95	46	47.30	112
11	47.53	101	59.70	68	5.173	310	49.13	33	29.124	284	2.42	97	57.41	50	46.18	52
21	48.54	105	59.02	6	5.483	327	49.46	82	29.408	301	3.39	127	57.91	52	45.66	10
Mai 1	49.59	106	58.96	57	5.810	336	50.28	130	29.709	311	4.66	153	58.43	53	45.76	72
11	50.65	103	59.53	118	6.146	338	51.58	173	30.020	315	6.19	176	58.96	53	46.48	132
21	51.68	97	60.71	174	6.484	331	53.31	211	30.335	312	7.95	193	59.49	52	47.80	187
31	52.65	89	62.45	225	6.815	316	55.42	242	30.647	302	9.88	203	60.01	48	49.67	236
Juni 10	53.54	77	64.70	269	7.131	295	57.84	268	30.949	285	11.91	212	60.49	43	52.03	278
20	54.31	64	67.39	306	7.426	263	60.52	286	31.234	260	14.03	211	60.92	37	54.81	314
30	54.95	49	70.45	336	7.689	228	63.38	296	31.494	229	16.14	206	61.29	31	57.95	340
Juli 10	55.44	32	73.81	357	7.917	185	66.34	299	31.723	193	18.20	197	61.60	24	61.35	359
20	55.76	16	77.38	369	8.102	140	69.33	296	31.916	152	20.17	183	61.84	16	64.94	370
30	55.92	1	81.07	375	8.242	92	72.29	286	32.068	109	22.00	166	62.00	7	68.64	372
Aug. 8*)	[8] 55.91	18	84.82	371	[9] 8.334	43	75.15	271	[10] 32.177	64	23.66	147	[11] 62.07	0	72.36	366
18	55.73	34	88.53	360	8.377	5	77.86	251	32.241	20	25.13	126	62.07	8	76.02	353
28	55.39	50	92.13	342	8.372	50	80.37	226	32.261	21	26.39	103	61.99	16	79.55	332
Sept. 7	54.89	64	95.55	317	8.322	90	82.63	197	32.240	58	27.42	81	61.83	23	82.87	305
17	54.25	77	98.72	284	8.232	123	84.60	164	32.182	91	28.23	59	61.60	29	85.92	271
27	53.48	87	101.56	246	8.109	151	86.24	130	32.091	114	28.82	36	61.31	34	88.63	232
Okt. 7	52.61	96	104.02	202	7.958	169	87.54	93	31.977	132	29.18	15	60.97	38	90.95	187
17	51.65	102	106.04	152	7.789	180	88.47	53	31.845	139	29.33	6	60.59	40	92.82	138
27	50.63	105	107.56	99	7.609	182	89.00	13	31.706	141	29.27	25	60.19	42	94.20	84
Nov. 6	49.58	107	108.55	41	7.427	175	89.13	27	31.565	133	29.02	44	59.77	42	95.04	28
16	48.51	104	108.96	18	7.252	163	88.86	68	31.432	120	28.58	60	59.35	41	95.32	29
26	47.47	100	108.78	77	7.089	143	88.18	106	31.312	100	27.98	76	58.94	39	95.03	86
Dez. 6	46.47	91	108.01	135	6.946	119	87.12	143	31.212	77	27.22	90	58.55	35	94.17	142
16	45.56	81	106.66	189	6.827	89	85.69	174	31.135	50	26.32	101	58.20	30	92.75	194
26	44.75	68	104.77	237	6.738	56	83.95	199	31.085	20	25.31	108	57.90	25	90.81	237
36	44.07		102.40		6.682		81.96		31.065		24.23		57.65		88.44	
Mittl. Ort	52.42		78.42		5.014		64.35		28.510		11.39		58.90		64.39	
sec δ, tg δ	4.754		+4.647		1.154		+0.576		1.004		+0.087		2.152		+1.905	
a, a'	−1.2		+14.6		+2.6		+14.8		+3.0		+14.9		+1.4		+15.2	
b, b'	+0.23		+ 0.69		+0.03		+ 0.68		0.00		+ 0.67		+0.10		+ 0.65	

*) Bei Stern 797), 800) und 803) lies Aug. 9

Tag	804) ι Pegasi				805) γ Pavonis				806) ζ Capricorni				809) β Cephei			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$21^h\,18^m$		$+19°\,30'$		$21^h\,20^m$		$-65°\,39'$		$21^h\,22^m$		$-22°\,41'$		$21^h\,27^m$		$+70°\,15'$	
Jan. 1	58.318	23	60.37	171	54.58	10	91.26	255	50.198	1	79.24	34	44.12	35	68.09	250
11	58.295	10	58.66	180	54.48	1	88.71	282	50.197	33	78.90	49	43.77	26	65.59	285
21	58.305	43	56.86	181	54.47	8	85.89	301	50.230	65	78.41	64	43.51	16	62.74	310
31	58.348	76	55.05	174	54.55	15	82.88	313	50.295	98	77.77	79	43.35	4	59.64	322
Feb. 10	58.424	110	53.31	158	54.70	23	79.75	317	50.393	131	76.98	93	43.31	8	56.42	321
20	58.534	145	51.73	136	54.93	31	76.58	316	50.524	163	76.05	108	43.39	20	53.21	307
März 2	58.679	178	50.37	105	55.24	38	73.42	306	50.687	194	74.97	123	43.59	31	50.14	280
12	58.857	210	49.32	69	55.62	45	70.36	292	50.881	224	73.74	136	43.90	41	47.34	243
22	59.067	241	48.63	29	56.07	51	67.44	271	51.105	252	72.38	149	44.31	51	44.91	194
Apr. 1	59.308	267	48.34	13	56.58	55	64.73	245	51.357	279	70.89	158	44.82	59	42.97	141
11	59.575	291	48.47	57	57.13	60	62.28	215	51.636	302	69.31	165	45.41	64	41.56	81
21	59.866	307	49.04	99	57.73	64	60.13	180	51.938	321	67.66	169	46.05	68	40.75	18
Mai 1	60.173	319	50.03	139	58.37	65	58.33	141	52.259	335	65.97	167	46.73	70	40.57	44
11	60.492	324	51.42	174	59.02	66	56.92	100	52.594	341	64.30	163	47.43	70	41.01	105
21	60.816	320	53.16	204	59.68	66	55.92	56	52.935	342	62.67	154	48.13	67	42.06	163
31	61.136	309	55.20	229	60.34	64	55.36	11	53.277	334	61.13	140	48.80	63	43.69	215
Juni 10	61.445	291	57.49	246	60.98	60	55.25	33	53.611	318	59.73	123	49.43	57	45.84	261
20	61.736	264	59.95	259	61.58	56	55.58	77	53.929	294	58.50	103	50.00	49	48.45	301
30	62.000	232	62.54	263	62.14	49	56.35	118	54.223	264	57.47	80	50.49	41	51.46	332
Juli 10	62.232	194	65.17	262	62.63	41	57.53	155	54.487	226	56.67	56	50.90	31	54.78	355
20	62.426	152	67.79	254	63.04	32	59.08	186	54.713	184	56.11	32	51.21	20	58.33	370
30	62.578	107	70.33	243	63.36	23	60.94	211	54.897	137	55.79	9	51.41	10	62.03	378
Aug. 9	62.685	62	72.76	226	63.59	13	63.05	229	55.034	89	55.70	13	51.51	1	65.81	376
18	62.747	16	75.02	205	63.72	2	65.34	238	55.123	40	55.83	32	51.50	12	69.57	368
28	62.763	26	77.07	181	63.74	7	67.72	238	55.163	6	56.15	49	51.38	22	73.25	350
Sept. 7	62.737	65	78.88	155	63.67	17	70.10	227	55.157	49	56.64	60	51.16	31	76.75	328
17	62.672	98	80.43	126	63.50	26	72.37	208	55.108	86	57.24	68	50.85	40	80.03	296
27	62.574	123	81.69	96	63.24	32	74.45	179	55.022	115	57.92	71	50.45	47	82.99	260
Okt. 7	62.451	142	82.65	65	62.92	38	76.24	142	54.907	135	58.63	70	49.98	53	85.59	217
17	62.309	153	83.30	33	62.54	42	77.66	99	54.772	148	59.33	64	49.45	57	87.76	168
27	62.156	155	83.63	1	62.12	43	78.65	51	54.624	150	59.97	56	48.88	60	89.44	116
Nov. 6	62.001	150	83.64	31	61.69	42	79.16	1	54.474	144	60.53	45	48.28	61	90.60	59
16	61.851	138	83.33	62	61.27	40	79.15	54	54.330	130	60.98	32	47.67	61	91.19	0
26	61.713	120	82.71	92	60.87	35	78.61	105	54.200	109	61.30	18	47.06	58	91.19	60
Dez. 6	61.593	98	81.79	119	60.52	30	77.56	154	54.091	84	61.48	3	46.48	54	90.59	118
16	61.495	72	80.60	143	60.22	23	76.02	197	54.007	55	61.51	11	45.94	48	89.41	174
26	61.423	42	79.17	162	59.99	15	74.05	236	53.952	23	61.40	26	45.46	41	87.67	222
36	61.381		77.55		59.84		71.69		53.929		61.14		45.05		85.45	
Mittl. Ort	59.236		60.82		55.58		75.28		50.723		69.44		48.21		58.82	
sec δ, tg δ	1.061		+0.354		2.427		−2.212		1.084		−0.418		2.962		+2.788	
a, *a'*	+2.8		+15.3		+5.0		+15.4		+3.4		+15.5		+0.8		+15.8	
b, *b'*	+0.02		+ 0.65		−0.11		+ 0.64		−0.02		+ 0.63		+0.15		+ 0.62	

Tag	808) β Aquarii AR.		808) β Aquarii Dekl.		810) ν Octantis AR.		810) ν Octantis Dekl.		811) 74 Cygni AR.		811) 74 Cygni Dekl.		815) ε Pegasi AR.		815) ε Pegasi Dekl.	
1933	21ʰ 28ᵐ		−5° 51′		21ʰ 34ᵐ		−77° 40′		21ʰ 34ᵐ		+40° 6′		21ʰ 40ᵐ		+9° 33′	
Jan. 1	1.398	7	66.64	54	3.94	35	98.83	290	14.339	84	47.50	222	53.017	27	59.26	122
11	1.391	23	67.18	48	3.59	18	95.93	321	14.255	46	45.28	245	52.990	1	58.04	125
21	1.414	52	67.66	39	3.41	1	92.72	342	14.209	5	42.83	258	52.991	31	56.79	124
31	1.466	83	68.05	26	3.40	15	89.30	355	14.204	40	40.25	260	53.022	61	55.55	114
Feb. 10	1.549	114	68.31	9	3.55	32	85.75	358	14.244	85	37.65	250	53.083	92	54.41	100
20	1.663	143	68.40	9	3.87	47	82.17	353	14.329	131	35.15	231	53.175	124	53.41	80
März 2	1.806	174	68.31	32	4.34	61	78.64	342	14.460	177	32.84	201	53.299	157	52.61	54
12	1.980	203	67.99	55	4.95	75	75.22	322	14.637	221	30.83	163	53.456	189	52.07	23
22	2.183	231	67.44	80	5.70	87	72.00	296	14.858	261	29.20	117	53.645	219	51.84	11
Apr. 1	2.414	257	66.64	104	6.57	97	69.04	265	15.119	298	28.03	66	53.864	247	51.95	46
11	2.671	280	65.60	127	7.54	105	66.39	228	15.417	327	27.37	12	54.111	273	52.41	81
21	2.951	299	64.33	147	8.59	112	64.11	186	15.744	350	27.25	43	54.384	293	53.22	115
Mai 1	3.250	312	62.86	163	9.71	117	62.25	142	16.094	365	27.68	96	54.677	309	54.37	146
11	3.562	319	61.23	175	10.88	118	60.83	93	16.459	371	28.64	147	54.986	317	55.83	173
21	3.881	320	59.48	182	12.06	118	59.90	44	16.830	366	30.11	192	55.303	318	57.56	196
31	4.201	312	57.66	185	13.24	114	59.46	7	17.196	354	32.03	234	55.621	312	59.52	212
Juni 10	4.513	298	55.81	181	14.38	108	59.53	57	17.550	330	34.37	267	55.933	299	61.64	223
20	4.811	276	54.00	174	15.46	100	60.10	105	17.880	301	37.04	293	56.232	277	63.87	228
30	5.087	247	52.26	162	16.46	88	61.15	150	18.181	262	39.97	313	56.509	249	66.15	228
Juli 10	5.334	212	50.64	147	17.34	75	62.65	190	18.443	217	43.10	325	56.758	214	68.43	222
20	5.546	172	49.17	129	18.09	59	64.55	224	18.660	169	46.35	329	56.972	176	70.65	211
30	5.718	130	47.88	109	18.68	41	66.79	250	18.829	116	49.64	326	57.148	133	72.76	196
Aug. 9	5.848	85	46.79	87	19.09	23	69.29	269	18.945	64	52.90	316	57.281	90	74.72	179
18	5.933	40	45.92	67	19.32	4	71.98	277	19.009	11	56.06	300	57.371	45	76.51	157
28	5.973	3	45.25	46	19.36	16	74.75	274	19.020	40	59.06	279	57.416	3	78.08	135
Sept. 7	5.970	41	44.79	27	19.20	34	77.49	263	18.980	85	61.85	251	57.419	36	79.43	111
17	5.929	75	44.52	9	18.86	50	80.12	239	18.895	125	64.36	220	57.383	69	80.54	86
27	5.854	102	44.43	6	18.36	65	82.51	206	18.770	158	66.56	183	57.314	97	81.40	62
Okt. 7	5.752	121	44.49	19	17.71	77	84.57	164	18.612	184	68.39	144	57.217	118	82.02	38
17	5.631	132	44.68	31	16.94	86	86.21	114	18.428	200	69.83	102	57.099	130	82.40	14
27	5.499	135	44.99	38	16.08	90	87.35	59	18.228	209	70.85	57	56.969	136	82.54	9
Nov. 6	5.364	130	45.37	46	15.18	90	87.94	1	18.019	209	71.42	10	56.833	133	82.45	32
16	5.234	119	45.83	51	14.28	88	87.93	60	17.810	202	71.52	38	56.700	125	82.13	54
26	5.115	101	46.34	55	13.40	82	87.33	119	17.608	186	71.14	83	56.575	111	81.59	73
Dez. 6	5.014	78	46.89	57	12.58	71	86.14	175	17.422	166	70.31	129	56.464	93	80.86	90
16	4.936	54	47.46	58	11.87	59	84.39	225	17.256	138	69.02	169	56.371	70	79.96	106
26	4.882	26	48.04	56	11.28	45	82.14	268	17.118	107	67.33	203	56.301	45	78.90	117
36	4.856		48.60		10.83		79.46		17.011		65.30		56.256		77.73	
Mittl. Ort	1.985		60.65		5.75		81.88		15.700		42.45		53.705		60.98	
sec δ, tg δ	1.005		−0.103		4.690		−4.582		1.308		+0.842		1.014		+0.169	
a, *a′*	+3.2		+15.8		+6.7		+16.1		+2.4		+16.1		+2.9		+16.5	
b, *b′*	−0.01		+ 0.62		−0.25		+ 0.59		+0.05		+ 0.59		+0.01		+ 0.57	

Scheinbare Sternörter 1933

Tag	819) δ Capricorni AR.		Dekl.		821) π² Cygni AR.		Dekl.		822) γ Gruis AR.		Dekl.		823) 16 Pegasi AR.		Dekl.	
1933	21ʰ 43ᵐ		−16° 25′		21ʰ 44ᵐ		+48° 59′		21ʰ 49ᵐ		−37° 40′		21ʰ 49ᵐ		+25° 36′	
Jan. 1	20.257	17	64.14	0	17.289	134	63.46	228	52.263	40	64.02	107	59.829	58	35.88	174
11	20.240	12	64.14	13	17.155	89	61.18	257	52.223	3	62.95	131	59.771	27	34.14	191
21	20.252	42	64.01	26	17.066	41	58.61	277	52.220	35	61.64	154	59.744	4	32.23	197
31	20.294	73	63.75	42	17.025	11	55.84	283	52.255	73	60.10	173	59.748	39	30.26	195
Feb. 10	20.367	104	63.33	59	17.036	67	53.01	280	52.328	111	58.37	189	59.787	75	28.31	185
20	20.471	135	62.74	76	17.103	122	50.21	263	52.439	149	56.48	203	59.862	112	26.46	166
März 2	20.606	167	61.98	95	17.225	178	47.58	237	52.588	186	54.45	212	59.974	149	24.80	139
12	20.773	197	61.03	113	17.403	231	45.21	199	52.774	224	52.33	218	60.123	187	23.41	105
22	20.970	228	59.90	130	17.634	281	43.22	154	52.998	259	50.15	222	60.310	222	22.36	64
Apr. 1	21.198	256	58.60	146	17.915	325	41.68	103	53.257	293	47.93	220	60.532	255	21.72	21
11	21.454	281	57.14	160	18.240	361	40.65	46	53.550	323	45.73	215	60.787	284	21.51	24
21	21.735	303	55.54	169	18.601	389	40.19	11	53.873	348	43.58	205	61.071	307	21.75	69
Mai 1	22.038	320	53.85	176	18.990	408	40.30	69	54.221	369	41.53	190	61.378	324	22.44	114
11	22.358	329	52.09	177	19.398	414	40.99	124	54.590	382	39.63	172	61.702	334	23.58	155
21	22.687	333	50.32	175	19.812	411	42.23	176	54.972	387	37.91	148	62.036	335	25.13	192
31	23.020	329	48.57	166	20.223	396	43.99	221	55.359	383	36.43	122	62.371	328	27.05	222
Juni 10	23.349	316	46.91	155	20.619	371	46.20	262	55.742	371	35.21	92	62.699	313	29.27	248
20	23.665	296	45.36	138	20.990	336	48.82	295	56.113	349	34.29	60	63.012	290	31.75	265
30	23.961	269	43.98	120	21.326	294	51.77	321	56.462	318	33.69	26	63.302	260	34.40	277
Juli 10	24.230	235	42.78	97	21.620	244	54.98	338	56.780	279	33.43	6	63.562	224	37.17	282
20	24.465	195	41.81	74	21.864	189	58.36	347	57.059	234	33.49	38	63.786	182	39.99	281
30	24.660	151	41.07	51	22.053	130	61.83	351	57.293	183	33.87	68	63.968	138	42.80	273
Aug. 9	24.811	106	40.56	27	22.183	71	65.34	344	57.476	129	34.55	93	64.106	91	45.53	260
18*)	[17] 24.917	60	40.29	5	[18] 22.254	12	68.78	333	57.605	73	35.48	115	64.197	45	48.13	243
28	24.977	14	40.24	14	22.266	46	72.11	314	[19] 57.678	18	36.63	131	[19] 64.242	0	50.56	221
Sept. 7	24.991	28	40.38	31	22.220	99	75.25	289	57.696	34	37.94	139	64.242	41	52.77	195
17	24.963	64	40.69	44	22.121	145	78.14	258	57.662	80	39.33	141	64.201	77	54.72	167
27	24.899	95	41.13	53	21.976	185	80.72	222	57.582	119	40.74	137	64.124	108	56.39	136
Okt. 7	24.804	116	41.66	59	21.791	216	82.94	181	57.463	149	42.11	125	64.016	130	57.75	104
17	24.688	131	42.25	60	21.575	239	84.75	137	57.314	169	43.36	108	63.886	146	58.79	69
27	24.557	137	42.85	58	21.336	252	86.12	89	57.145	179	44.44	85	63.740	155	59.48	33
Nov. 6	24.420	134	43.43	54	21.084	258	87.01	38	56.966	179	45.29	59	63.585	156	59.81	3
16	24.286	125	43.97	48	20.826	253	87.39	14	56.787	169	45.88	30	63.429	150	59.78	38
26	24.161	109	44.45	39	20.573	241	87.25	66	56.618	152	46.18	1	63.279	138	59.40	74
Dez. 6	24.052	88	44.84	30	20.332	220	86.59	116	56.466	127	46.17	32	63.141	122	58.66	107
16	23.964	64	45.14	19	20.112	192	85.43	164	56.339	98	45.85	63	63.019	100	57.59	136
26	23.900	37	45.33	7	19.920	157	83.79	206	56.241	64	45.22	91	62.919	76	56.23	162
36	23.863		45.40		19.763		81.73		56.177		44.31		62.843		54.61	
Mittl. Ort	20.712		55.98		18.972		55.86		52.631		51.30		60.733		33.05	
sec δ, tg δ	1.043		−0.295		1.524		+1.150		1.263		−0.772		1.109		+0.479	
a, *a′*	+3.3		+16.6		+2.2		+16.6		+3.6		+16.9		+2.7		+16.9	
b, *b′*	−0.02		+ 0.56		+0.06		+ 0.56		−0.04		+ 0.54		+0.03		+ 0.54	

*) Bei Stern 822) und 823) lies Aug. 19

Tag	827) α Aquarii AR.		827) α Aquarii Dekl.		828) ι Aquarii AR.		828) ι Aquarii Dekl.		830) 20 Cephei AR.		830) 20 Cephei Dekl.		829) α Gruis AR.		829) α Gruis Dekl.	
1933	22h 2m		−0° 38′		22h 2m		−14° 11′		22h 2m		+62° 27′		22h 4m		−47° 16′	
Jan. 1	20.112	34	49.50	73	48.875	34	50.84	12	55.70	27	41.46	216	0.853	77	86.30	147
11	20.078	10	50.23	69	48.841	6	50.96	1	55.43	21	39.30	255	0.776	36	84.83	177
21	20.068	17	50.92	62	48.835	22	50.95	16	55.22	15	36.75	284	0.740	7	83.06	205
31	20.085	46	51.54	51	48.857	51	50.79	31	55.07	7	33.91	302	0.747	53	81.01	226
Feb. 10	20.131	76	52.05	35	48.908	81	50.48	49	55.00	2	30.89	307	0.800	98	78.75	243
20	20.207	106	52.40	16	48.989	112	49.99	68	55.02	10	27.82	299	0.898	143	76.32	256
März 2	20.313	138	52.56	7	49.101	144	49.31	88	55.12	18	24.83	280	1.041	188	73.76	263
12	20.451	170	52.49	33	49.245	177	48.43	107	55.30	26	22.03	248	1.229	232	71.13	266
22	20.621	202	52.16	60	49.422	208	47.36	127	55.56	34	19.55	206	1.461	274	68.47	264
Apr. 1	20.823	232	51.56	88	49.630	239	46.09	145	55.90	41	17.49	157	1.735	315	65.83	256
11	21.055	260	50.68	115	49.869	266	44.64	161	56.31	46	15.92	102	2.050	351	63.27	245
21	21.315	284	49.53	139	50.135	291	43.03	173	56.77	50	14.90	42	2.401	383	60.82	226
Mai 1	21.599	301	48.14	162	50.426	310	41.30	182	57.27	53	14.48	18	2.784	408	58.56	205
11	21.900	315	46.52	179	50.736	323	39.48	187	57.80	55	14.66	78	3.192	426	56.51	178
21	22.215	320	44.73	193	51.059	331	37.61	186	58.35	54	15.44	136	3.618	435	54.73	146
31	22.535	318	42.80	200	51.390	328	35.75	181	58.89	53	16.80	189	4.053	433	53.27	111
Juni 10	22.853	308	40.80	202	51.718	320	33.94	171	59.42	49	18.69	237	4.486	422	52.16	75
20	23.161	291	38.78	200	52.038	302	32.23	156	59.91	45	21.06	279	4.908	400	51.41	36
30	23.452	267	36.78	192	52.340	277	30.67	138	60.36	39	23.85	313	5.308	368	51.05	4
Juli 10	23.719	235	34.86	180	52.617	247	29.29	117	60.75	33	26.98	340	5.676	326	51.09	43
20	23.954	198	33.06	164	52.864	208	28.12	94	61.08	26	30.38	358	6.002	277	51.52	79
30	24.152	158	31.42	146	53.072	167	27.18	70	61.34	18	33.96	371	6.279	220	52.31	112
Aug. 9	24.310	115	29.96	125	53.239	123	26.48	45	61.52	9	37.67	373	6.499	159	53.43	140
19	24.425	71	28.71	102	53.362	77	26.03	21	61.61	2	41.40	368	6.658	96	54.83	163
28	[22]24.496	28	27.69	80	[22]53.439	32	25.82	1	[22]61.63	5	45.08	357	[23]6.754	31	56.46	178
Sept. 7	24.524	11	26.89	58	53.471	9	25.81	19	61.58	13	48.65	337	6.785	30	58.24	186
17	24.513	47	26.31	37	53.462	47	26.00	35	61.45	20	52.02	310	6.755	85	60.10	185
27	24.466	76	25.94	18	53.415	78	26.35	46	61.25	26	55.12	279	6.670	133	61.95	177
Okt. 7	24.390	99	25.76	0	53.337	103	26.81	55	60.99	31	57.91	239	6.537	173	63.72	159
17	24.291	115	25.76	16	53.234	120	27.36	59	60.68	35	60.30	194	6.364	200	65.31	136
27	24.176	124	25.92	30	53.114	128	27.95	60	60.33	37	62.24	146	6.164	216	66.67	105
Nov. 6	24.052	124	26.22	42	52.986	130	28.55	59	59.96	39	63.70	91	5.948	222	67.72	69
16	23.928	119	26.64	52	52.856	124	29.14	54	59.57	40	64.61	35	5.726	215	68.41	31
26	23.809	108	27.16	61	52.732	112	29.68	47	59.17	40	64.96	22	5.511	199	68.72	9
Dez. 6	23.701	93	27.77	67	52.620	95	30.15	39	58.77	37	64.74	81	5.312	174	68.63	50
16	23.608	74	28.44	71	52.525	74	30.54	30	58.40	34	63.93	137	5.138	143	68.13	89
26	23.534	51	29.15	72	52.451	51	30.84	18	58.06	30	62.56	187	4.995	106	67.24	126
36	23.483		29.87		52.400		31.02		57.76		60.69		4.889		65.98	
Mittl. Ort	20.596		45.93		49.249		43.64		58.24		29.98		1.143		71.79	
sec δ, tg δ	1.000		−0.011		1.032		−0.253		2.163		+1.918		1.474		−1.083	
a, *a′*	+3.1		+17.5		+3.2		+17.5		+1.8		+17.5		+3.8		+17.5	
b, *b′*	0.00		+ 0.49		−0.01		+ 0.49		+0.11		+ 0.49		−0.06		+ 0.48	

Scheinbare Sternörter 1933

Tag	834) ϑ Pegasi AR.	Δ	834) ϑ Pegasi Dekl.	Δ	835) π Pegasi AR.	Δ	835) π Pegasi Dekl.	Δ
1933	22h 6m		+5° 51'		22h 6m		+32° 50'	
Jan. 1	48.680	42	61.49	99	59.591	87	61.48	182
11	48.638	17	60.50	100	59.504	57	59.66	204
21	48.621	10	59.50	96	59.447	24	57.62	217
31	48.631	38	58.54	88	59.423	12	55.45	222
Feb. 10	48.669	68	57.66	73	59.435	51	53.23	215
20	48.737	100	56.93	55	59.486	92	51.08	201
März 2	48.837	133	56.38	31	59.578	135	49.07	175
12	48.970	165	56.07	3	59.713	176	47.32	143
22	49.135	199	56.04	28	59.889	216	45.89	104
Apr. 1	49.334	229	56.32	59	60.105	254	44.85	59
11	49.563	258	56.91	91	60.359	289	44.26	10
21	49.821	282	57.82	121	60.648	315	44.16	38
Mai 1	50.103	302	59.03	150	60.963	336	44.54	87
11	50.405	314	60.53	173	61.299	349	45.41	133
21	50.719	321	62.26	193	61.648	353	46.74	176
31	51.040	318	64.19	207	62.001	348	48.50	213
Juni 10	51.358	309	66.26	215	62.349	334	50.63	244
20	51.667	292	68.41	219	62.683	312	53.07	270
30	51.959	267	70.60	216	62.995	281	55.77	288
Juli 10	52.226	236	72.76	209	63.276	245	58.65	299
20	52.462	200	74.85	196	63.521	203	61.64	303
30	52.662	160	76.81	181	63.724	157	64.67	301
Aug. 9	52.822	117	78.62	162	63.881	109	67.68	292
19	52.939	73	80.24	141	63.990	60	70.60	279
28	53.012	31	81.65	119	64.050	13	73.39	260
Sept. 7	53.043	8	82.84	96	64.063	31	75.99	235
17	53.035	44	83.80	72	64.032	71	78.34	208
27	52.991	74	84.52	50	63.961	104	80.42	177
Okt. 7	52.917	98	85.02	28	63.857	131	82.19	142
17	52.819	113	85.30	7	63.726	151	83.61	105
27	52.706	122	85.37	13	63.575	164	84.66	66
Nov. 6	52.584	125	85.24	31	63.411	168	85.32	25
16	52.459	121	84.93	48	63.243	168	85.57	16
26	52.338	110	84.45	63	63.075	159	85.41	57
Dez. 6	52.228	97	83.82	76	62.916	146	84.84	97
16	52.131	79	83.06	88	62.770	127	83.87	132
26	52.052	57	82.18	95	62.643	104	82.55	165
36	51.995		81.23		62.539		80.90	
Mittl. Ort	49.209		63.06		60.576		55.75	
sec δ, tg δ	1.005		+0.103		1.190		+0.646	
a, *a'*	+3.0		+17.6		+2.7		+17.7	
b, *b'*	+0.01		+ 0.47		+0.04		+ 0.47	

Tag	837) 24 Cephei AR.	Δ	837) 24 Cephei Dekl.	Δ	836) ζ Cephei AR.	Δ	836) ζ Cephei Dekl.	Δ
1933	22h 8m		+72° 0'		22h 8m		+57° 51'	
Jan. 1	27.37	48	52.56	205	29.524	224	84.91	211
11	26.89	39	50.51	248	29.300	174	82.80	248
21	26.50	29	48.03	283	29.126	117	80.32	276
31	26.21	17	45.20	306	29.009	53	77.56	292
Feb. 10	26.04	4	42.14	316	28.956	15	74.64	298
20	26.00	9	38.98	312	28.971	87	71.66	289
März 2	26.09	22	35.86	299	29.058	159	68.77	270
12	26.31	34	32.87	270	29.217	230	66.07	239
22	26.65	46	30.17	232	29.447	296	63.68	197
Apr. 1	27.11	56	27.85	185	29.743	356	61.71	149
11	27.67	65	26.00	130	30.099	407	60.22	95
21	28.32	70	24.70	71	30.506	446	59.27	37
Mai 1	29.02	75	23.99	11	30.952	474	58.90	23
11	29.77	77	23.88	51	31.426	488	59.13	81
21	30.54	76	24.39	110	31.914	489	59.94	138
31	31.30	73	25.49	167	32.403	477	61.32	190
Juni 10	32.03	69	27.16	218	32.880	451	63.22	236
20	32.72	62	29.34	263	33.331	414	65.58	276
30	33.34	54	31.97	302	33.745	366	68.34	310
Juli 10	33.88	45	34.99	334	34.111	311	71.44	335
20	34.33	34	38.33	357	34.422	247	74.79	353
30	34.67	23	41.90	373	34.669	180	78.32	364
Aug. 9	34.90	12	45.63	381	34.849	111	81.96	366
19	35.02	1	49.44	380	34.960	40	85.62	361
28	35.03	11	53.24	373	35.000	29	89.23	348
Sept. 7	34.92	21	56.97	357	34.971	94	92.71	328
17	34.71	32	60.54	335	34.877	152	95.99	303
27	34.39	40	63.89	304	34.725	205	99.02	270
Okt. 7	33.99	48	66.93	267	34.520	249	101.72	232
17	33.51	55	69.60	225	34.271	284	104.04	187
27	32.96	60	71.85	175	33.987	309	105.91	140
Nov. 6	32.36	63	73.60	121	33.678	324	107.31	88
16	31.73	64	74.81	63	33.354	330	108.19	33
26	31.09	65	75.44	4	33.024	324	108.52	24
Dez. 6	30.44	62	75.48	58	32.700	310	108.28	80
16	29.82	58	74.90	117	32.390	284	107.48	133
26	29.24	52	73.73	172	32.106	249	106.15	182
36	28.72		72.01		31.857		104.33	
Mittl. Ort	31.40		39.32		31.600		73.70	
sec δ, tg δ	3.238		+3.080		1.880		+1.592	
a, *a'*	+1.1		+17.7		+2.1		+17.7	
b, *b'*	+0.18		+ 0.47		+0.09		+ 0.47	

Tag	840) ϑ Aquarii AR.	Δ	840) ϑ Aquarii Dekl.	Δ	841) α Tucanae AR.	Δ	841) α Tucanae Dekl.	Δ
1933	22h 13m		−8° 6′		22h 13m		−60° 35′	
Jan. 1	17.614	41	68.63	40	55.39	16	56.69	199
11	17.573	16	69.03	30	55.23	11	54.70	235
21	17.557	11	69.33	18	55.12	4	52.35	266
31	17.568	38	69.51	4	55.08	2	49.69	291
Feb. 10	17.606	67	69.55	12	55.10	9	46.78	306
20	17.673	99	69.43	32	55.19	15	43.72	318
März 2	17.772	130	69.11	53	55.34	22	40.54	321
12	17.902	163	68.58	76	55.56	28	37.33	317
22	18.065	195	67.82	100	55.84	33	34.16	309
Apr. 1	18.260	227	66.82	122	56.17	39	31.07	293
11	18.487	255	65.60	143	56.56	45	28.14	272
21	18.742	281	64.17	161	57.01	48	25.42	245
Mai 1	19.023	302	62.56	176	57.49	52	22.97	213
11	19.325	316	60.80	187	58.01	55	20.84	176
21	19.641	324	58.93	193	58.56	56	19.08	135
31	19.965	324	57.00	193	59.12	56	17.73	91
Juni 10	20.289	316	55.07	189	59.68	54	16.82	46
20	20.605	301	53.18	180	60.22	52	16.36	1
30	20.906	278	51.38	166	60.74	48	16.37	46
Juli 10	21.184	248	49.72	149	61.22	43	16.83	91
20	21.432	212	48.23	129	61.65	37	17.74	132
30	21.644	172	46.94	107	62.02	29	19.06	168
Aug. 9	21.816	129	45.87	83	62.31	21	20.74	197
19	21.945	85	45.04	60	62.52	12	22.71	219
28	22.030	41	44.44	37	62.64	4	24.90	234
Sept. 7	22.071	1	44.07	16	62.68	4	27.24	237
17	22.072	37	43.91	3	62.64	13	29.61	232
27	22.035	68	43.94	19	62.51	20	31.93	218
Okt. 7	21.967	92	44.13	32	62.31	25	34.11	192
17	21.875	110	44.45	42	62.06	29	36.03	159
27	21.765	120	44.87	49	61.77	33	37.62	119
Nov. 6	21.645	123	45.36	53	61.44	34	38.81	73
16	21.522	119	45.89	56	61.10	34	39.54	23
26	21.403	110	46.45	56	60.76	32	39.77	28
Dez. 6	21.293	95	47.01	53	60.44	29	39.49	79
16	21.198	78	47.54	49	60.15	25	38.70	129
26	21.120	57	48.03	44	59.90	20	37.41	173
36	21.063		48.47		59.70		35.68	
Mittl. Ort	17.981		63.34		55.68		40.20	
sec δ, tg δ	1.010		−0.143		2.037		−1.774	
a, *a′*	+3.2		+17.9		+4.1		+17.9	
b, *b′*	−0.01		+ 0.45		−0.11		+ 0.45	

Tag	842) γ Aquarii AR.	Δ	842) γ Aquarii Dekl.	Δ	844) 3 Lacertae AR.	Δ	844) 3 Lacertae Dekl.	Δ
1933	22h 18m		−1° 43′		22h 20m		+51° 53′	
Jan. 1	11.375	45	35.75	66	53.702	184	45.10	195
11	11.330	22	36.41	61	53.518	146	43.15	233
21	11.308	3	37.02	53	53.372	99	40.82	260
31	11.311	31	37.55	42	53.273	48	38.22	274
Feb. 10	11.342	60	37.97	26	53.225	9	35.48	280
20	11.402	91	38.23	7	53.234	68	32.68	274
März 2	11.493	123	38.30	16	53.302	131	29.94	255
12	11.616	156	38.14	40	53.433	191	27.39	225
22	11.772	189	37.74	67	53.624	250	25.14	187
Apr. 1	11.961	221	37.07	94	53.874	304	23.27	140
11	12.182	250	36.13	119	54.178	351	21.87	88
21	12.432	276	34.94	144	54.529	389	20.99	33
Mai 1	12.708	297	33.50	165	54.918	418	20.66	24
11	13.005	312	31.85	182	55.336	434	20.90	81
21	13.317	321	30.03	194	55.770	441	21.71	135
31	13.638	321	28.09	200	56.211	433	23.06	184
Juni 10	13.959	314	26.09	204	56.644	416	24.90	230
20	14.273	299	24.05	199	57.060	387	27.20	268
30	14.572	276	22.06	191	57.447	349	29.88	299
Juli 10	14.848	247	20.15	178	57.796	302	32.87	325
20	15.095	212	18.37	162	58.098	249	36.12	341
30	15.307	173	16.75	143	58.347	191	39.53	350
Aug. 9	15.480	130	15.32	121	58.538	130	43.03	353
19	15.610	87	14.11	98	58.668	69	46.56	347
28	15.697	45	13.13	76	58.737	8	50.03	335
Sept. 7	15.742	4	12.37	54	58.745	49	53.38	316
17	15.746	32	11.83	32	58.696	101	56.54	291
27	15.714	63	11.51	12	58.595	148	59.45	259
Okt. 7	15.651	88	11.39	4	58.447	187	62.04	224
17	15.563	105	11.43	20	58.260	219	64.28	181
27	15.458	116	11.63	33	58.041	242	66.09	136
Nov. 6	15.342	120	11.96	43	57.799	257	67.45	87
16	15.222	118	12.39	53	57.542	263	68.32	35
26	15.104	109	12.92	59	57.279	261	68.67	19
Dez. 6	14.995	96	13.51	63	57.018	250	68.48	72
16	14.899	80	14.14	67	56.768	231	67.76	123
26	14.819	60	14.81	67	56.537	204	66.53	169
36	14.759		15.48		56.333		64.84	
Mittl. Ort	11.773		32.44		55.296		34.03	
sec δ, tg δ	1.000		−0.030		1.621		+1.275	
a, *a′*	+3.1		+18.1		+2.4		+18.2	
b, *b′*	0.00		+ 0.43		+0.08		+ 0.42	

Scheinbare Sternörter 1933

Tag	848) 7 Lacertae AR.		848) 7 Lacertae Dekl.		850) η Aquarii AR.		850) η Aquarii Dekl.		852) 10 Lacertae AR.		852) 10 Lacertae Dekl.		855) ζ Pegasi AR.		855) ζ Pegasi Dekl.	
1933	22h 28m		+49° 56′		22h 31m		−0° 27′		22h 36m		+38° 41′		22h 38m		+10° 28′	
Jan. 1	30.207	176	26.28	187	54.498	55	50.87	69	14.131	126	72.89	169	6.751	66	52.86	104
11	30.031	141	24.41	222	54.443	33	51.56	65	14.005	99	71.20	197	6.685	45	51.82	110
21	29.890	99	22.10	250	54.410	9	52.21	58	13.906	66	69.23	219	6.640	21	50.72	111
31	29.791	51	19.69	266	54.401	17	52.79	47	13.840	30	67.04	230	6.619	5	49.61	106
Feb. 10	29.740	2	17.03	273	54.418	46	53.26	32	13.810	11	64.74	232	6.624	34	48.55	95
20	29.742	59	14.30	265	54.464	76	53.58	13	13.821	56	62.42	223	6.658	66	47.60	78
März 2	29.801	118	11.65	249	54.540	108	53.71	9	13.877	103	60.19	205	6.724	100	46.82	56
12	29.919	177	9.16	221	54.648	143	53.62	35	13.980	150	58.14	178	6.824	136	46.26	29
22	30.096	234	6.95	183	54.791	176	53.27	61	14.130	197	56.36	141	6.960	171	45.97	1
Apr. 1	30.330	286	5.12	138	54.967	210	52.66	88	14.327	242	54.95	99	7.131	207	45.98	34
11	30.616	334	3.74	88	55.177	241	51.78	115	14.569	282	53.96	51	7.338	239	46.32	68
21	30.950	373	2.86	33	55.418	268	50.63	140	14.851	317	53.45	2	7.577	268	47.00	101
Mai 1	31.323	401	2.53	23	55.686	292	49.23	162	15.168	345	53.43	49	7.845	292	48.01	133
11	31.724	421	2.76	78	55.978	309	47.61	181	15.513	364	53.92	98	8.137	310	49.34	161
21	32.145	429	3.54	131	56.287	319	45.80	194	15.877	374	54.90	145	8.447	322	50.95	185
31	32.574	424	4.85	180	56.606	322	43.86	203	16.251	373	56.35	188	8.769	324	52.80	205
Juni 10	32.998	409	6.65	225	56.928	317	41.83	207	16.624	364	58.23	225	9.093	319	54.85	219
20	33.407	384	8.90	263	57.245	304	39.76	205	16.988	345	60.48	257	9.412	306	57.04	227
30	33.791	349	11.53	294	57.549	283	37.71	197	17.333	317	63.05	283	9.718	286	59.31	230
Juli 10	34.140	305	14.47	319	57.832	255	35.74	186	17.650	283	65.88	300	10.004	258	61.61	227
20	34.445	255	17.66	336	58.087	223	33.88	170	17.933	241	68.88	311	10.262	224	63.88	219
30	34.700	200	21.02	345	58.310	184	32.18	151	18.174	194	71.99	316	10.486	187	66.07	206
Aug. 9	34.900	142	24.47	348	58.494	142	30.67	130	18.368	146	75.15	314	10.673	145	68.13	190
19	35.042	83	27.95	343	58.636	100	29.37	108	18.514	96	78.29	305	10.818	103	70.03	171
29	35.125	24	31.38	331	58.736	58	28.29	84	18.610	46	81.34	291	10.921	60	71.74	149
Sept. 7	[29] 35.149	30	34.69	313	[30] 58.794	17	27.45	62	[31] 18.656	1	84.25	271	[31] 10.981	20	73.23	126
17	35.119	82	37.82	288	58.811	20	26.83	40	18.655	44	86.96	246	11.001	16	74.49	103
27	35.037	127	40.70	258	58.791	51	26.43	19	18.611	83	89.42	218	10.985	49	75.52	77
Okt. 7	34.910	166	43.28	223	58.740	77	26.24	1	18.528	116	91.60	184	10.936	75	76.29	54
17	34.744	197	45.51	183	58.663	97	26.23	15	18.412	142	93.44	147	10.861	95	76.83	31
27	34.547	221	47.34	139	58.566	110	26.38	30	18.270	160	94.91	108	10.766	109	77.14	8
Nov. 6	34.326	236	48.73	89	58.456	115	26.68	41	18.110	174	95.99	65	10.657	116	77.22	14
16	34.090	243	49.62	40	58.341	115	27.09	51	17.936	178	96.64	21	10.541	118	77.08	35
26	33.847	243	50.02	12	58.226	110	27.60	59	17.758	178	96.85	23	10.423	115	76.73	54
Dez. 6	33.604	235	49.90	65	58.116	99	28.19	65	17.580	171	96.62	67	10.308	106	76.19	72
16	33.369	218	49.25	114	58.017	86	28.84	69	17.409	158	95.95	109	10.202	94	75.47	87
26	33.151	194	48.11	161	57.931	68	29.53	69	17.251	140	94.86	148	10.108	79	74.60	99
36	32.957		46.50		57.863		30.22		17.111		93.38		10.029		73.61	
Mittl. Ort	31.646		15.04		54.840		48.42		15.103		63.75		7.182		51.72	
sec δ, tg δ	1.554		+1.189		1.000		−0.008		1.281		+0.801		1.017		+0.185	
a, a′	+2.5		+18.5		+3.1		+18.6		+2.7		+18.7		+3.0		+18.8	
b, b′	+0.07		+ 0.39		0.00		+ 0.37		+0.05		+ 0.36		+0.01		+ 0.35	

Tag	856) β Gruis AR.		856) β Gruis Dekl.		857) η Pegasi AR.		857) η Pegasi Dekl.		859) λ Pegasi AR.		859) λ Pegasi Dekl.		860) ε Gruis AR.		860) ε Gruis Dekl.	
1933	$22^h 38^m$		$-47° 13'$		$22^h 39^m$		$+29° 52'$		$22^h 43^m$		$+23° 12'$		$22^h 44^m$		$-51° 39'$	
Jan. 1	40.377	119	83.50	125	50.793	100	19.78	152	17.512	87	50.46	136	30.988	146	86.62	139
11	40.258	82	82.25	161	50.693	77	18.26	174	17.425	65	49.10	152	30.842	107	85.23	178
21	40.176	43	80.64	194	50.616	49	16.52	189	17.360	41	47.58	163	30.735	64	83.45	212
31	40.133	2	78.70	222	50.567	17	14.63	196	17.319	12	45.95	166	30.671	19	81.33	242
Feb. 10	40.131	42	76.48	244	50.550	17	12.67	194	17.307	21	44.29	162	30.652	29	78.91	265
20	40.173	86	74.04	262	50.567	57	10.73	183	17.328	56	42.67	149	30.681	78	76.26	284
März 2	40.259	132	71.42	276	50.624	97	8.90	163	17.384	93	41.18	128	30.759	129	73.42	297
12	40.391	179	68.66	283	50.721	139	7.27	136	17.477	133	39.90	101	30.888	180	70.45	303
22	40.570	225	65.83	286	50.860	181	5.91	101	17.610	173	38.89	68	31.068	230	67.42	303
Apr. 1	40.795	270	62.97	282	51.041	222	4.90	61	17.783	211	38.21	31	31.298	280	64.39	298
11	41.065	311	60.15	274	51.263	260	4.29	17	17.994	246	37.90	10	31.578	327	61.41	287
21	41.376	350	57.41	259	51.523	292	4.12	28	18.240	278	38.00	52	31.905	368	58.54	270
Mai 1	41.726	383	54.82	239	51.815	318	4.40	73	18.518	305	38.52	92	32.273	404	55.84	247
11	42.109	407	52.43	215	52.133	337	5.13	117	18.823	323	39.44	132	32.677	432	53.37	219
21	42.516	424	50.28	184	52.470	348	6.30	158	19.146	334	40.76	166	33.109	452	51.18	185
31	42.940	431	48.44	149	52.818	349	7.88	194	19.480	338	42.42	198	33.561	461	49.33	147
Juni 10	43.371	428	46.95	112	53.167	343	9.82	226	19.818	332	44.40	224	34.022	458	47.86	105
20	43.799	414	45.83	71	53.510	326	12.08	250	20.150	319	46.64	243	34.480	445	46.81	63
30	44.213	389	45.12	29	53.836	303	14.58	269	20.469	296	49.07	257	34.925	421	46.18	19
Juli 10	44.602	355	44.83	13	54.139	271	17.27	282	20.765	267	51.64	264	35.346	384	45.99	26
20	44.957	311	44.96	54	54.410	234	20.09	287	21.032	232	54.28	266	35.730	338	46.25	69
30	45.268	259	45.50	93	54.644	192	22.96	286	21.264	193	56.94	261	36.068	283	46.94	109
Aug. 9	45.527	202	46.43	127	54.836	148	25.82	281	21.457	150	59.55	252	36.351	222	48.03	145
19	45.729	140	47.70	155	54.984	101	28.63	268	21.607	106	62.07	237	36.573	156	49.48	175
29	45.869	77	49.25	178	55.085	55	31.31	252	21.713	62	64.44	220	36.729	88	51.23	198
Sept. 7	45.946	16	51.03	192	55.140	12	33.83	231	21.775	20	66.64	197	36.817	20	53.21	211
17	45.962	42	52.95	199	55.152	29	36.14	206	21.795	18	68.61	173	36.837	45	55.32	217
27	45.920	95	54.94	196	55.123	63	38.20	178	21.777	53	70.34	146	36.792	102	57.49	213
Okt. 7	45.825	139	56.90	184	55.060	93	39.98	147	21.724	81	71.80	118	36.690	152	59.62	200
17	45.686	174	58.74	165	54.967	117	41.45	114	21.643	102	72.98	87	36.538	193	61.62	178
27	45.512	199	60.39	137	54.850	134	42.59	78	21.541	119	73.85	55	36.345	222	63.40	148
Nov. 6	45.313	212	61.76	104	54.716	143	43.37	42	21.422	129	74.40	24	36.123	239	64.88	111
16	45.101	215	62 80	66	54.573	149	43.79	4	21.293	132	74.64	8	35.884	245	65.99	69
26	44.886	209	63.46	26	54.424	147	43.83	33	21.161	132	74.56	40	35.639	240	66.68	25
Dez. 6	44.677	193	63.72	18	54.277	140	43.50	70	21.029	124	74.16	70	35.399	225	66.93	22
16	44.484	170	63.54	60	54.137	129	42.80	105	20.905	114	73.46	98	35.174	201	66.71	68
26	44.314	142	62.94	100	54.008	113	41.75	135	20.791	99	72.48	123	34.973	171	66.03	113
36	44.172		61.94		53.895		40.40		20.692		71.25		34.802		64.90	
Mittl. Ort	40.404		68.99		51.526		12.79		18.101		45.20		30.958		71.32	
sec δ, tg δ	1.473		−1.081		1.153		+0.574		1.088		+0.429		1.612		−1.265	
a, a'	+3.6		+18.8		+2.8		+18.8		+2.9		+18.9		+3.6		+19.0	
b, b'	−0.07		+ 0.35		+0.04		+ 0.34		+0.03		+ 0.33		−0.08		+ 0.32	

Tag	863) ι Cephei AR.		863) ι Cephei Dekl.		864) λ Aquarii AR.		864) λ Aquarii Dekl.		865) ρ Indi AR.		865) ρ Indi Dekl.		866) δ Aquarii AR.		866) δ Aquarii Dekl.	
1933	$22^h 47^m$		$+65° 50'$		$22^h 49^m$		$-7° 55'$		$22^h 50^m$		$-70° 25'$		$22^h 51^m$		$-16° 10'$	
Jan. 1	$14^s.91$	38	$67''.26$	163	$7^s.025$	63	$75''.97$	40	$1^s.48$	37	$73''.89$	205	$5^s.670$	68	$45''.83$	9
11	14.53	32	65.63	212	6.962	45	76.37	30	1.11	30	71.84	249	5.602	48	45.92	8
21	14.21	26	63.51	250	6.917	22	76.67	17	0.81	21	69.35	289	5.554	24	45.84	26
31	13.95	18	61.01	280	6.895	3	76.84	1	0.60	12	66.46	318	5.530	1	45.58	46
Feb. 10	13.77	9	58.21	298	6.898	30	76.85	16	0.48	3	63.28	342	5.531	30	45.12	66
20	13.68	0	55.23	302	6.928	61	76.69	36	0.45	7	59.86	356	5.561	60	44.46	87
März 2	13.68	10	52.21	294	6.989	93	76.33	57	0.52	17	56.30	363	5.621	93	43.59	108
12	13.78	19	49.27	275	7.082	126	75.76	80	0.69	26	52.67	362	5.714	128	42.51	128
22	13.97	29	46.52	243	7.208	162	74.96	104	0.95	36	49.05	353	5.842	164	41.23	149
Apr. 1	14.26	38	44.09	203	7.370	197	73.92	126	1.31	44	45.52	338	6.006	198	39.74	167
11	14.64	45	42.06	155	7.567	229	72.66	148	1.75	52	42.14	315	6.204	232	38.07	183
21	15.09	52	40.51	100	7.796	260	71.18	167	2.27	60	38.99	286	6.436	264	36.24	195
Mai 1	15.61	56	39.51	43	8.056	286	69.51	183	2.87	66	36.13	250	6.700	290	34.29	203
11	16.17	60	39.08	17	8.342	305	67.68	195	3.53	71	33.63	210	6.990	311	32.26	207
21	16.77	62	39.25	75	8.647	320	65.73	201	4.24	74	31.53	166	7.301	326	30.19	206
31	17.39	61	40.00	132	8.967	326	63.72	203	4.98	76	29.87	116	7.627	333	28.13	199
Juni 10	18.00	59	41.32	185	9.293	323	61.69	200	5.74	75	28.71	66	7.960	332	26.14	188
20	18.59	55	43.17	232	9.616	314	59.69	190	6.49	73	28.05	13	8.292	322	24.26	172
30	19.14	51	45.49	273	9.930	295	57.79	178	7.22	69	27.92	39	8.614	305	22.54	151
Juli 10	19.65	44	48.22	309	10.225	271	56.01	160	7.91	64	28.31	89	8.919	279	21.03	128
20	20.09	37	51.31	337	10.496	239	54.41	139	8.55	56	29.20	137	9.198	248	19.75	101
30	20.46	30	54.68	357	10.735	202	53.02	117	9.11	46	30.57	180	9.446	210	18.74	74
Aug. 9	20.76	21	58.25	371	10.937	161	51.85	91	9.57	36	32.37	216	9.656	168	18.00	45
19	20.97	13	61.96	375	11.098	119	50.94	66	9.93	25	34.53	244	9.824	125	17.55	18
29	21.10	4	65.71	372	11.217	77	50.28	42	10.18	12	36.97	264	9.949	81	17.37	8
Sept. 7	21.14	4	69.43	362	11.294	35	49.86	18	10.30	0	39.61	273	10.030	37	17.45	31
17	21.10	12	73.05	345	11.329	4	49.68	3	10.30	13	42.34	271	10.067	3	17.76	50
27	20.98	20	76.50	321	11.325	36	49.71	21	10.17	23	45.05	259	10.064	38	18.26	64
Okt. 7	20.78	26	79.71	288	11.289	66	49.92	35	9.94	33	47.64	235	10.026	68	18.90	75
17	20.52	32	82.59	250	11.223	87	50.27	47	9.61	42	49.99	202	9.958	91	19.65	81
27	20.20	36	85.09	206	11.136	102	50.74	55	9.19	48	52.01	159	9.867	108	20.46	81
Nov. 6	19.84	40	87.15	156	11.034	111	51.29	59	8.71	52	53.60	110	9.759	117	21.27	78
16	19.44	43	88.71	102	10.923	113	51.88	62	8.19	54	54.70	55	9.642	120	22.05	72
26	19.01	44	89.73	44	10.810	111	52.50	61	7.65	54	55.25	3	9.522	117	22.77	62
Dez. 6	18.57	44	90.17	15	10.699	103	53.11	58	7.11	52	55.22	62	9.405	110	23.39	49
16	18.13	43	90.02	74	10.596	92	53.69	53	6.59	48	54.60	120	9.295	97	23.88	35
26	17.70	39	89.28	131	10.504	76	54.22	45	6.11	42	53.40	173	9.198	81	24.23	20
36	17.31		87.97		10.428		54.67		5.69		51.67		9.117		24.43	
Mittl. Ort	17.36		51.68		7.211		71.81		1.40		56.19		5.780		39.23	
sec δ, tg δ	2.444		+2.230		1.010		−0.140		2.986		−2.813		1.041		−0.290	
a, *a'*	+2.1		+19.0		+3.1		+19.1		+4.2		+19.1		+3.2		+19.1	
b, *b'*	+0.14		+ 0.31		−0.01		+ 0.30		−0.18		+ 0.30		−0.02		+ 0.30	

Tag	867) α Pisc. austr. AR.		Dekl.		869) ο Andromedae AR.		Dekl.		870) β Pegasi AR.		Dekl.		871) α Pegasi AR.		Dekl.	
1933	22h 53m		−29° 58′		22h 58m		+41° 57′		23h 0m		+27° 43′		23h 1m		+14° 50′	
	s		″		s		″		s		″		s		″	
Jan. 1	57.108	85	50.25	44	49.134	152	66.86	152	30.834	105	15.79	133	24.936	83	43.27	107
11	57.023	61	49.81	72	48.982	128	65.34	185	30.729	86	14.46	154	24.853	66	42.20	117
21	56.962	34	49.09	99	48.854	98	63.49	211	30.643	62	12.92	170	24.787	44	41.03	122
31	56.928	5	48.10	124	48.756	63	61.38	228	30.581	34	11.22	178	24.743	20	39.81	121
Feb. 10	56.923	26	46.86	148	48.693	21	59.10	236	30.547	1	9.44	177	24.723	9	38.60	114
20	56.949	60	45.38	170	48.672	26	56.74	233	30.546	35	7.67	169	24.732	41	37.46	100
März 2	57.009	96	43.68	189	48.698	74	54.41	219	30.581	75	5.98	152	24.773	76	36.46	81
12	57.105	134	41.79	206	48.772	126	52.22	196	30.656	117	4.46	126	24.849	112	35.65	55
22	57.239	172	39.73	219	48.898	178	50.26	164	30.773	159	3.20	95	24.961	151	35.10	26
Apr. 1	57.411	211	37.54	229	49.076	227	48.62	125	30.932	201	2.25	58	25.112	189	34.84	7
11	57.622	247	35.25	235	49.303	274	47.37	79	31.133	240	1.67	18	25.301	225	34.91	43
21	57.869	280	32.90	236	49.577	314	46.58	31	31.373	276	1.49	26	25.526	257	35.34	78
Mai 1	58.149	310	30.54	232	49.891	347	46.27	20	31.649	305	1.75	68	25.783	286	36.12	112
11	58.459	334	28.22	223	50.238	371	46.47	70	31.954	327	2.43	110	26.069	307	37.24	144
21	58.793	350	25.99	208	50.609	386	47.17	119	32.281	342	3.53	149	26.376	322	38.68	173
31	59.143	360	23.91	189	50.995	391	48.36	164	32.623	348	5.02	184	26.698	329	40.41	197
Juni 10	59.503	358	22.02	164	51.386	385	50.00	205	32.971	344	6.86	215	27.027	327	42.38	216
20	59.861	349	20.38	137	51.771	370	52.05	240	33.315	334	9.01	239	27.354	317	44.54	228
30	60.210	332	19.01	105	52.141	345	54.45	270	33.649	313	11.40	257	27.671	300	46.82	237
Juli 10	60.542	306	17.96	71	52.486	312	57.15	293	33.962	285	13.97	270	27.971	274	49.19	238
20	60.848	271	17.25	37	52.798	272	60.08	309	34.247	251	16.67	276	28.245	244	51.57	234
30	61.119	231	16.88	2	53.070	227	63.17	318	34.498	212	19.43	275	28.489	207	53.91	225
Aug. 9	61.350	186	16.86	31	53.297	178	66.35	320	34.710	170	22.18	270	28.696	167	56.16	212
19	61.536	138	17.17	62	53.475	128	69.55	317	34.880	126	24.88	260	28.863	126	58.28	196
29	61.674	89	17.79	88	53.603	77	72.72	305	35.006	81	27.48	243	28.989	84	60.24	176
Sept. 7	61.763	40	18.67	109	53.680	27	75.77	290	35.087	38	29.91	224	29.073	43	62.00	153
17	61.803	5	19.76	125	53.707	19	78.67	269	35.125	2	32.15	201	29.116	5	63.53	130
27	61.798	45	21.01	133	53.688	60	81.36	241	35.123	38	34.16	174	29.121	28	64.83	106
Okt. 7	61.753	80	22.34	136	53.628	98	83.77	211	35.085	68	35.90	146	29.093	57	65.89	80
17	61.673	108	23.70	131	53.530	127	85.88	176	35.017	94	37.36	115	29.036	80	66.69	55
27	61.565	127	25.01	120	53.403	152	87.64	137	34.923	113	38.51	82	28.956	96	67.24	29
Nov. 6	61.438	139	26.21	104	53.251	169	89.01	95	34.810	126	39.33	48	28.860	109	67.53	5
16	61.299	144	27.25	82	53.082	181	89.96	50	34.684	135	39.81	14	28.751	115	67.58	19
26	61.155	140	28.07	59	52.901	186	90.46	5	34.549	137	39.95	21	28.636	115	67.39	41
Dez. 6	61.015	133	28.66	31	52.715	184	90.51	41	34.412	134	39.74	56	28.521	112	66.98	64
16	60.882	118	28.97	3	52.531	177	90.10	87	34.278	127	39.18	88	28.409	105	66.34	82
26	60.764	100	29.00	26	52.354	164	89.23	128	34.151	115	38.30	117	28.304	92	65.52	99
36	60.664		28.74		52.190		87.95		34.036		37.13		28.212		64.53	
Mittl. Ort	57.109		39.82		50.048		55.44		31.402		8.26		25.297		39.69	
sec δ, tg δ	1.154		−0.577		1.345		+0.899		1.130		+0.526		1.035		+0.265	
a, a′	+3.3		+19.2		+2.8		+19.3		+2.9		+19.4		+3.0		+19.4	
b, b′	−0.04		+ 0.28		+0.06		+ 0.26		+0.03		+ 0.26		+0.02		+ 0.25	

Scheinbare Sternörter 1933

Tag	872) ϑ Gruis				874) π Cephei				873) c² Aquarii				875) Br 3077			
	AR.		Dekl.		AR.		Dekl.		AR.		Dekl.		AR.		Dekl.	
1933	$23^h\ 3^m$		−43° 52′		$23^h\ 5^m$		+75° 1′		$23^h\ 5^m$		−21° 31′		$23^h\ 10^m$		+56° 47′	
Jan. 1	6.786	129	72.12	93	41.83	69	48.60	129	52.606	81	79.00	7	1.491	254	68.82	141
11	6.657	101	71.19	132	41.14	62	47.31	183	52.525	63	78.93	30	1.237	223	67.41	186
21	6.556	69	69.87	166	40.52	51	45.48	230	52.462	40	78.63	52	1.014	183	65.55	224
31	6.487	33	68.21	197	40.01	40	43.18	268	52.422	14	78.11	76	0.831	133	63.31	253
Feb. 10	6.454	5	66.24	224	39.61	26	40.50	293	52.408	13	77.35	98	0.698	75	60.78	270
20	6.459	47	64.00	247	39.35	11	37.57	308	52.421	45	76.37	121	0.623	9	58.08	277
März 2	6.506	90	61.53	264	39.24	5	34.49	308	52.466	78	75.16	141	0.614	61	55.31	271
12	6.596	134	58.89	276	39.29	20	31.41	297	52.544	114	73.75	162	0.675	134	52.60	254
22	6.730	180	56.13	284	39.49	36	28.44	272	52.658	151	72.13	181	0.809	206	50.06	226
Apr. 1	6.910	226	53.29	286	39.85	51	25.72	238	52.809	189	70.32	196	1.015	275	47.80	189
11	7.136	269	50.43	283	40.36	63	23.34	194	52.998	224	68.36	208	1.290	338	45.91	144
21	7.405	309	47.60	273	40.99	73	21.40	144	53.222	258	66.28	218	1.628	394	44.47	93
Mai 1	7.714	344	44.87	258	41.72	82	19.96	88	53.480	288	64.10	221	2.022	438	43.54	39
11	8.058	374	42.29	238	42.54	88	19.08	29	53.768	311	61.89	221	2.460	472	43.15	16
21	8.432	394	39.91	211	43.42	91	18.79	30	54.079	329	59.68	215	2.932	492	43.31	71
31	8.826	407	37.80	180	44.33	91	19.09	89	54.408	339	57.53	203	3.424	498	44.02	125
Juni 10	9.233	409	36.00	144	45.24	89	19.98	145	54.747	341	55.50	187	3.922	492	45.27	176
20	9.642	401	34.56	105	46.13	85	21.43	197	55.088	334	53.63	166	4.414	473	47.03	220
30	10.043	383	33.51	64	46.98	78	23.40	244	55.422	319	51.97	142	4.887	441	49.23	261
Juli 10	10.426	355	32.87	22	47.76	69	25.84	285	55.741	295	50.55	113	5.328	401	51.84	294
20	10.781	317	32.65	20	48.45	59	28.69	319	56.036	264	49.42	82	5.729	351	54.78	320
30	11.098	272	32.85	62	49.04	47	31.88	348	56.300	228	48.60	51	6.080	295	57.98	340
Aug. 9	11.370	221	33.47	99	49.51	36	35.36	367	56.528	186	48.09	20	6.375	232	61.38	352
19	11.591	165	34.46	132	49.87	24	39.03	380	56.714	143	47.89	10	6.607	169	64.90	357
29	11.756	106	35.78	159	50.11	10	42.83	384	56.857	97	47.99	38	6.776	104	68.47	355
Sept. 7*)	11.862	48	37.37	179	50.21	3	46.67	382	56.954	53	48.37	61	6.880	39	72.02	345
17	11.910	7	39.16	192	50.18	15	50.49	370	57.007	11	48.98	81	6.919	21	75.47	329
27	11.903	58	41.08	195	50.03	28	54.19	352	57.018	28	49.79	95	6.898	78	78.76	306
Okt. 7	11.845	103	43.03	189	49.75	38	57.71	326	56.990	59	50.74	103	6.820	130	81.82	278
17	11.742	138	44.92	177	49.37	48	60.97	291	56.931	87	51.77	107	6.690	174	84.60	242
27	11.604	167	46.69	155	48.89	57	63.88	252	56.844	105	52.84	103	6.516	213	87.02	201
Nov. 6	11.437	184	48.24	126	48.32	65	66.40	203	56.739	118	53.87	96	6.303	243	89.03	156
16	11.253	194	49.50	92	47.67	70	68.43	150	56.621	124	54.83	84	6.060	266	90.59	105
26	11.059	192	50.42	55	46.97	74	69.93	92	56.497	123	55.67	68	5.794	279	91.64	53
Dez. 6	10.867	185	50.97	14	46.23	76	70.85	31	56.374	119	56.35	49	5.515	285	92.17	3
16	10.682	169	51.11	28	45.47	75	71.16	32	56.255	108	56.84	29	5.230	281	92.14	57
26	10.513	148	50.83	69	44.72	71	70.84	92	56.147	93	57.13	7	4.949	266	91.57	110
36	10.365		50.14		44.01		69.92		56.054		57.20		4.683		90.47	
Mittl. Ort	6.643		58.48		45.66		30.45		52.593		71.17		2.926		53.25	
sec δ, tg δ	1.387		−0.962		3.871		+3.739		1.075		−0.395		1.826		+1.528	
a, *a′*	+3.4		+19.4		+1.9		+19.5		+3.2		+19.5		+2.6		+19.6	
b, *b′*	−0.06		+ 0.25		+0.24		+ 0.23		−0.03		+ 0.23		+0.10		+ 0.22	

*) Bei Stern 875) lies Sept. 8

Tag	877) γ Tucanae AR.		877) γ Tucanae Dekl.		879) γ Sculptoris AR.		879) γ Sculptoris Dekl.		880) τ Pegasi AR.		880) τ Pegasi Dekl.	
1933	$23^h\,13^m$		$-58°\,35'$		$23^h\,15^m$		$-32°\,53'$		$23^h\,17^m$		$+23°\,22'$	
Jan. 1	32.087	232	88.42	140	12.761	106	61.27	44	18.684	104	30.66	115
11	31.855	192	87.02	185	12.655	85	60.83	76	18.580	88	29.51	135
21	31.663	147	85.17	227	12.570	61	60.07	107	18.492	67	28.16	146
31	31.516	95	82.90	262	12.509	33	59.00	136	18.425	44	26.70	153
Feb. 10	31.421	40	80.28	290	12.476	2	57.64	162	18.381	13	25.17	153
20	31.381	17	77.38	313	12.474	33	56.02	187	18.368	20	23.64	143
März 2	31.398	79	74.25	329	12.507	69	54.15	208	18.388	57	22.21	128
12	31.477	140	70.96	337	12.576	109	52.07	225	18.445	97	20.93	105
22	31.617	203	67.59	339	12.685	149	49.82	239	18.542	139	19.88	75
Apr. 1	31.820	265	64.20	333	12.834	189	47.43	250	18.681	181	19.13	41
11	32.085	323	60.87	322	13.023	230	44.93	255	18.862	220	18.72	4
21	32.408	378	57.65	303	13.253	267	42.38	255	19.082	257	18.68	35
Mai 1	32.786	425	54.62	278	13.520	300	39.83	250	19.339	288	19.03	75
11	33.211	467	51.84	248	13.820	328	37.33	240	19.627	313	19.78	113
21	33.678	496	49.36	210	14.148	349	34.93	223	19.940	331	20.91	148
31	34.174	516	47.26	169	14.497	362	32.70	202	20.271	340	22.39	180
Juni 10	34.690	521	45.57	124	14.859	366	30.68	176	20.611	340	24.19	207
20	35.211	516	44.33	76	15.225	361	28.92	145	20.951	332	26.26	229
30	35.727	495	43.57	26	15.586	346	27.47	110	21.283	315	28.55	244
Juli 10	36.222	462	43.31	24	15.932	324	26.37	74	21.598	292	30.99	254
20	36.684	416	43.55	72	16.256	292	25.63	37	21.890	260	33.53	258
30	37.100	359	44.27	117	16.548	254	25.26	1	22.150	225	36.11	257
Aug. 9	37.459	293	45.44	158	16.802	210	25.27	38	22.375	185	38.68	249
19	37.752	219	47.02	194	17.012	162	25.65	71	22.560	143	41.17	238
29	37.971	141	48.96	221	17.174	113	26.36	101	22.703	101	43.55	222
Sept. 8	38.112	62	51.17	239	17.287	63	27.37	125	22.804	59	45.77	202
17	38.174	16	53.56	248	17.350	16	28.62	142	22.863	19	47.79	180
27	38.158	89	56.04	247	17.366	28	30.04	153	22.882	16	49.59	155
Okt. 7	38.069	155	58.51	235	17.338	66	31.57	157	22.866	47	51.14	128
17	37.914	211	60.86	214	17.272	97	33.14	152	22.819	73	52.42	100
27	37.703	255	63.00	182	17.175	121	34.66	141	22.746	94	53.42	71
Nov. 6	37.448	287	64.82	143	17.054	138	36.07	123	22.652	108	54.13	41
16	37.161	305	66.25	98	16.916	147	37.30	100	22.544	119	54.54	11
26	36.856	311	67.23	48	16.769	149	38.30	72	22.425	123	54.65	20
Dez. 6	36.545	304	67.71	5	16.620	144	39.02	42	22.302	124	54.45	50
16	36.241	285	67.66	57	16.476	135	39.44	10	22.178	120	53.95	77
26	35.956	258	67.09	109	16.341	120	39.54	23	22.058	111	53.18	102
36	35.698		66.00		16.221		39.31		21.947		52.16	
Mittl. Ort	31.753		72.18		12.609		50.46		19.074		23.60	
sec δ, tg δ	1.919		−1.638		1.191		−0.647		1.089		+0.432	
a, *a'*	+3.5		+19.6		+3.2		+19.7		+3.0		+19.7	
b, *b'*	−0.11		+ 0.20		−0.04		+ 0.19		+0.03		+ 0.19	

Scheinbare Sternörter 1933

Tag	882) 4 Cassiopeiae AR.		882) Dekl.		884) ϰ Piscium AR.		884) Dekl.		885) 70 Pegasi AR.		885) Dekl.	
1933	$23^h\ 21^m$		+61° 54′		$23^h\ 23^m$		+0° 53′		$23^h\ 25^m$		+12° 23′	
Jan. 1	49.51	33	70.35	124	29.775	82	18.70	66	45.667	90	30.11	92
11	49.18	30	69.11	174	29.693	68	18.04	63	45.577	78	29.19	100
21	48.88	25	67.37	217	29.625	52	17.41	57	45.499	60	28.19	104
31	48.63	20	65.20	250	29.573	30	16.84	47	45.439	38	27.15	102
Feb. 10	48.43	13	62.70	274	29.543	5	16.37	33	45.401	13	26.13	95
20	48.30	5	59.96	285	29.538	24	16.04	16	45.388	17	25.18	82
März 2	48.25	2	57.11	284	29.562	55	15.88	5	45.405	51	24.36	65
12	48.27	12	54.27	271	29.617	90	15.93	28	45.456	88	23.71	41
22	48.39	20	51.56	248	29.707	128	16.21	54	45.544	127	23.30	13
Apr. 1	48.59	28	49.08	214	29.835	165	16.75	81	45.671	165	23.17	16
11	48.87	36	46.94	171	30.000	201	17.56	108	45.836	204	23.33	49
21	49.23	42	45.23	123	30.201	236	18.64	133	46.040	240	23.82	82
Mai 1	49.65	48	44.00	69	30.437	266	19.97	157	46.280	270	24.64	114
11	50.13	52	43.31	13	30.703	291	21.54	177	46.550	296	25.78	144
21	50.65	54	43.18	44	30.994	309	23.31	193	46.846	315	27.22	169
31	51.19	55	43.62	99	31.303	321	25.24	204	47.161	325	28.91	192
Juni 10	51.74	55	44.61	152	31.624	324	27.28	210	47.486	329	30.83	209
20	52.29	53	46.13	200	31.948	319	29.38	211	47.815	322	32.92	221
30	52.82	51	48.13	244	32.267	305	31.49	206	48.137	309	35.13	227
Juli 10	53.33	46	50.57	281	32.572	286	33.55	196	48.446	288	37.40	228
20	53.79	40	53.38	312	32.858	258	35.51	183	48.734	261	39.68	223
30	54.19	34	56.50	336	33.116	225	37.34	164	48.995	227	41.91	214
Aug. 9	54.53	27	59.86	353	33.341	188	38.98	143	49.222	189	44.05	200
19	54.80	20	63.39	363	33.529	149	40.41	121	49.411	150	46.05	183
29	55.00	13	67.02	365	33.678	108	41.62	97	49.561	110	47.88	163
Sept. 8	55.13	5	70.67	359	33.786	68	42.59	72	49.671	69	49.51	141
17	55.18	2	74.26	347	33.854	31	43.31	48	49.740	32	50.92	118
27	55.16	8	77.73	327	33.885	4	43.79	28	49.772	3	52.10	94
Okt. 7	55.08	14	81.00	301	33.881	33	44.07	7	49.769	33	53.04	71
17	54.94	20	84.01	268	33.848	59	44.14	11	49.736	58	53.75	47
27	54.74	25	86.69	228	33.789	77	44.03	26	49.678	77	54.22	25
Nov. 6	54.49	29	88.97	184	33.712	91	43.77	39	49.601	93	54.47	3
16	54.20	32	90.81	133	33.621	100	43.38	49	49.508	102	54.50	18
26	53.88	34	92.14	79	33.521	104	42.89	57	49.406	108	54.32	38
Dez. 6	53.54	35	92.93	23	33.417	103	42.32	63	49.298	108	53.94	56
16	53.19	36	93.16	35	33.314	99	41.69	67	49.190	105	53.38	72
26	52.83	34	92.81	91	33.215	90	41.02	68	49.085	98	52.66	86
36	52.49		91.90		33.125		40.34		48.987		51.80	
Mittl. Ort	51.16		53.04		29.855		18.82		45.859		26.25	
sec δ, tg δ	2.124		+1.874		1.000		+0.016		1.024		+0.220	
a, *a′*	+2.7		+19.8		+3.1		+19.8		+3.0		+19.8	
b, *b′*	+0.12		+ 0.17		0.00		+ 0.16		+0.01		+ 0.15	

Tag	891) ι Andromedae AR.		Dekl.		892) ι Piscium AR.		Dekl.		893) γ Cephei AR.		Dekl.	
1933	23ʰ 34ᵐ		+42° 53′		23ʰ 36ᵐ		+5° 15′		23ʰ 36ᵐ		+77° 15′	
Jan. 1	49ˢ.999	172	62″.60	117	30ˢ.127	88	48″.24	75	31ˢ.15	86	50″.62	83
11	49.827	155	61.43	154	30.039	77	47.49	77	30.29	79	49.79	142
21	49.672	133	59.89	186	29.962	62	46.72	74	29.50	71	48.37	194
31	49.539	102	58.03	207	29.900	42	45.98	67	28.79	58	46.43	240
Feb. 10	49.437	65	55.96	222	29.858	19	45.31	57	28.21	43	44.03	273
20	49.372	21	53.74	226	29.839	10	44.74	41	27.78	27	41.30	296
März 2	49.351	29	51.48	220	29.849	43	44.33	22	27.51	8	38.34	306
12	49.380	81	49.28	204	29.892	77	44.11	0	27.43	10	35.28	303
22	49.461	135	47.24	178	29.969	116	44.11	27	27.53	29	32.25	288
Apr. 1	49.596	190	45.46	146	30.085	154	44.38	55	27.82	47	29.37	261
11	49.786	242	44.00	105	30.239	192	44.93	83	28.29	63	26.76	225
21	50.028	289	42.95	61	30.431	228	45.76	111	28.92	77	24.51	180
Mai 1	50.317	328	42.34	13	30.659	260	46.87	138	29.69	89	22.71	128
11	50.645	362	42.21	35	30.919	287	48.25	162	30.58	98	21.43	73
21	51.007	384	42.56	83	31.206	307	49.87	182	31.56	103	20.70	15
31	51.391	397	43.39	130	31.513	320	51.69	197	32.59	106	20.55	43
Juni 10	51.788	400	44.69	172	31.833	326	53.66	209	33.65	106	20.98	101
20	52.188	392	46.41	210	32.159	322	55.75	213	34.71	103	21.99	155
30	52.580	373	48.51	243	32.481	310	57.88	212	35.74	97	23.54	205
Juli 10	52.953	347	50.94	269	32.791	293	60.00	208	36.71	89	25.59	251
20	53.300	313	53.63	290	33.084	266	62.08	198	37.60	79	28.10	291
30	53.613	272	56.53	304	33.350	235	64.06	182	38.39	67	31.01	324
Aug. 9	53.885	227	59.57	312	33.585	199	65.88	165	39.06	54	34.25	351
19	54.112	178	62.69	312	33.784	161	67.53	144	39.60	41	37.76	370
29	54.290	129	65.81	307	33.945	121	68.97	122	40.01	26	41.46	382
Sept. 8	54.419	80	68.88	296	34.066	82	70.19	98	40.27	11	45.28	385
17	54.499	33	71.84	280	34.148	44	71.17	75	40.38	3	49.13	382
27	54.532	11	74.64	258	34.192	9	71.92	52	40.35	18	52.95	370
Okt. 7	54.521	51	77.22	232	34.201	21	72.44	30	40.17	32	56.65	351
17	54.470	86	79.54	200	34.180	47	72.74	10	39.85	45	60.16	323
27	54.384	116	81.54	166	34.133	67	72.84	8	39.40	56	63.39	287
Nov. 6	54.268	141	83.20	126	34.066	83	72.76	24	38.84	67	66.26	245
16	54.127	159	84.46	85	33.983	94	72.52	39	38.17	76	68.71	196
26	53.968	174	85.31	41	33.889	100	72.13	50	37.41	83	70.67	140
Dez. 6	53.794	181	85.72	4	33.789	102	71.63	61	36.58	87	72.07	80
16	53.613	182	85.68	49	33.687	101	71.02	69	35.71	89	72.87	18
26	53.431	178	85.19	93	33.586	95	70.33	74	34.82	87	73.05	45
36	53.253		84.26		33.491		69.59		33.95		72.60	
Mittl. Ort	50.661		48.86		30.178		46.38		34.91		30.20	
sec δ, tg δ	1.365		+0.929		1.004		+0.092		4.535		+4.423	
a, a′	+2.9		+19.9		+3.1		+19.9		+2.5		+19.9	
b, b′	+0.06		+ 0.11		+0.01		+ 0.10		+0.29		+ 0.10	

Tag	894) ω² Aquarii AR.		894) Dekl.		895) 41 H. Cephei AR.		895) Dekl.		896) Lac. δ Sculptoris AR.		896) Dekl.	
1933	23h 39m		−14° 54′		23h 44m		+67° 25′		23h 45m		−28° 29′	
Jan. 1	15.105	93	60.67	25	39.83	45	83.73	88	26.625	115	72.31	11
11	15.012	80	60.92	6	39.38	41	82.85	144	26.510	100	72.20	42
21	14.932	64	60.98	13	38.97	37	81.41	192	26.410	82	71.78	74
31	14.868	44	60.85	35	38.60	31	79.49	234	26.328	60	71.04	103
Feb. 10	14.824	19	60.50	57	38.29	23	77.15	264	26.268	34	70.01	131
20	14.805	8	59.93	80	38.06	13	74.51	284	26.234	3	68.70	158
März 2	14.813	40	59.13	103	37.93	4	71.67	292	26.231	31	67.12	183
12	14.853	75	58.10	126	37.89	7	68.75	287	26.262	70	65.29	204
22	14.928	113	56.84	147	37.96	18	65.88	270	26.332	109	63.25	223
Apr. 1	15.041	151	55.37	168	38.14	28	63.18	243	26.441	150	61.02	237
11	15.192	190	53.69	187	38.42	37	60.75	205	26.591	192	58.65	249
21	15.382	226	51.82	201	38.79	47	58.70	161	26.783	231	56.16	254
Mai 1	15.608	259	49.81	213	39.26	54	57.09	111	27.014	268	53.62	255
11	15.867	287	47.68	220	39.80	60	55.98	55	27.282	299	51.07	251
21	16.154	309	45.48	220	40.40	63	55.43	1	27.581	325	48.56	240
31	16.463	324	43.28	218	41.03	66	55.44	57	27.906	342	46.16	224
Juni 10	16.787	332	41.10	208	41.69	66	56.01	112	28.248	351	43.92	202
20	17.119	329	39.02	193	42.35	65	57.13	164	28.599	351	41.90	175
30	17.448	320	37.09	174	43.00	62	58.77	212	28.950	344	40.15	145
Juli 10	17.768	302	35.35	152	43.62	57	60.89	254	29.294	326	38.70	110
20	18.070	276	33.83	124	44.19	51	63.43	291	29.620	300	37.60	73
30	18.346	246	32.59	95	44.70	45	66.34	321	29.920	268	36.87	36
Aug. 9	18.592	209	31.64	65	45.15	37	69.55	345	30.188	230	36.51	2
19	18.801	169	30.99	35	45.52	29	73.00	360	30.418	187	36.53	38
29	18.970	128	30.64	5	45.81	21	76.60	370	30.605	141	36.91	71
Sept. 8	19.098	86	30.59	22	46.02	12	80.30	370	30.746	95	37.62	99
17	19.184	45	30.81	45	46.14	3	84.00	365	30.841	51	38.61	122
27	19.229	9	31.26	65	46.17	6	87.65	350	30.892	8	39.83	139
Okt. 7	19.238	25	31.91	80	46.11	13	91.15	330	30.900	30	41.22	149
17	19.213	53	32.71	90	45.98	20	94.45	302	30.870	63	42.71	151
27	19.160	74	33.61	94	45.78	27	97.47	266	30.807	89	44.22	147
Nov. 6	19.086	92	34.55	94	45.51	33	100.13	224	30.718	109	45.69	134
16	18.994	103	35.49	89	45.18	38	102.37	176	30.609	124	47.03	118
26	18.891	109	36.38	80	44.80	41	104.13	123	30.485	132	48.21	95
Dez. 6	18.782	110	37.18	68	44.39	44	105.36	66	30.353	134	49.16	68
16	18.672	108	37.86	54	43.95	46	106.02	6	30.219	131	49.84	40
26	18.564	101	38.40	37	43.49	46	106.08	53	30.088	124	50.24	9
36	18.463		38.77		43.03		105.55		29.964		50.33	
Mittl. Ort	14.952		55.81		41.62		64.13		26.317		63.42	
sec δ, tg δ	1.035		−0.266		2.606		+2.407		1.138		−0.544	
a, a'	+3.1		+20.0		+2.9		+20.0		+3.1		+20.0	
b, b'	−0.02		+ 0.09		+0.16		+ 0.07		−0.04		+ 0.06	

Tag	898) φ Pegasi AR.		898) φ Pegasi Dekl.		902) ω Piscium AR.		902) ω Piscium Dekl.		903) ε Tucanae AR.		903) ε Tucanae Dekl.	
1933	$23^h\ 49^m$		$+18°\ 44'$		$23^h\ 55^m$		$+6°\ 29'$		$23^h\ 56^m$		$-65°\ 56'$	
	s		"		s		"		s		"	
Jan. 1	4.454	107	59.93	91	52.210	96	35.53	73	27.74	39	76.67	115
11	4.347	97	59.02	107	52.114	88	34.80	76	27.35	36	75.52	169
21	4.250	82	57.95	117	52.026	76	34.04	74	26.99	30	73.83	219
31	4.168	64	56.78	121	51.950	58	33.30	68	26.69	25	71.64	261
Feb. 10	4.104	39	55.57	121	51.892	36	32.62	59	26.44	18	69.03	297
20	4.065	9	54.36	113	51.856	10	32.03	45	26.26	11	66.06	327
März 2	4.056	25	53.23	99	51.846	22	31.58	28	26.15	4	62.79	349
12	4.081	64	52.24	79	51.868	57	31.30	5	26.11	4	59.30	362
22	4.145	105	51.45	53	51.925	96	31.25	19	26.15	13	55.68	369
Apr. 1	4.250	147	50.92	23	52.021	136	31.44	46	26.28	20	51.99	368
11	4.397	188	50.69	9	52.157	175	31.90	75	26.48	29	48.31	357
21	4.585	228	50.78	44	52.332	213	32.65	103	26.77	36	44.74	342
Mai 1	4.813	263	51.22	79	52.545	248	33.68	130	27.13	44	41.32	318
11	5.076	292	52.01	113	52.793	278	34.98	155	27.57	50	38.14	287
21	5.368	314	53.14	145	53.071	300	36.53	176	28.07	55	35.27	251
31	5.682	330	54.59	172	53.371	317	38.29	194	28.62	59	32.76	207
Juni 10	6.012	336	56.31	196	53.688	325	40.23	205	29.21	61	30.69	160
20	6.348	334	58.27	214	54.013	325	42.28	212	29.82	62	29.09	109
30	6.682	322	60.41	227	54.338	316	44.40	214	30.44	62	28.00	55
Juli 10	7.004	305	62.68	234	54.654	300	46.54	210	31.06	59	27.45	0
20	7.309	280	65.02	237	54.954	278	48.64	201	31.65	55	27.45	54
30	7.589	248	67.39	233	55.232	248	50.65	188	32.20	50	27.99	105
Aug. 9	7.837	213	69.72	225	55.480	215	52.53	171	32.70	42	29.04	154
19	8.050	174	71.97	212	55.695	178	54.24	152	33.12	34	30.58	197
29	8.224	134	74.09	196	55.873	139	55.76	129	33.46	25	32.55	232
Sept. 8	8.358	94	76.05	177	56.012	101	57.05	107	33.71	16	34.87	259
18	8.452	56	77.82	155	56.113	64	58.12	83	33.87	6	37.46	275
27	8.508	21	79.37	133	56.177	29	58.95	60	33.93	4	40.21	280
Okt. 7	8.529	11	80.70	109	56.206	3	59.55	38	33.89	14	43.01	275
17	8.518	40	81.79	84	56.203	30	59.93	17	33.75	22	45.76	257
27	8.478	62	82.63	58	56.173	53	60.10	1	33.53	29	48.33	230
Nov. 6	8.416	81	83.21	34	56.120	70	60.09	17	33.24	35	50.63	191
16	8.335	96	83.55	9	56.050	85	59.92	33	32.89	39	52.54	146
26	8.239	105	83.64	16	55.965	94	59.59	46	32.50	42	54.00	93
Dez. 6	8.134	111	83.48	40	55.871	100	59.13	56	32.08	44	54.93	37
16	8.023	113	83.08	62	55.771	102	58.57	65	31.64	43	55.30	21
26	7.910	111	82.46	81	55.669	100	57.92	72	31.21	41	55.09	80
36	7.799		81.65		55.569		57.20		30.80		54.29	
Mittl. Ort	4.582		52.94		52.159		32.50		26.77		60.06	
sec δ, tg δ	1.056		+0.339		1.007		+0.114		2.454		−2.241	
a, *a'*	+3.1		+20.0		+3.1		+20.0		+3.1		+20.0	
b, *b'*	+0.02		+ 0.05		+0.01		+ 0.02		−0.15		+ 0.02	

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Na) 43 Hev. Cephei $4^m.52$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder	Februar AR.	Februar Dekl.	Februar ☾ Glieder	März AR.	März Dekl.	März ☾ Glieder	April AR.	April Dekl.	April ☾ Glieder
	$0^h 59^m$	+85° 54′	in 0.01ˢ 0.01″	$0^h 58^m$	+85° 54′	in 0.01ˢ 0.01″	$0^h 58^m$	+85° 54′	in 0.01ˢ 0.01″	$0^h 58^m$	+85° 53′	in 0.01ˢ 0.01″
1	9.09	20.17	− 6 + 9	60.21	19.64	− 6 − 6	53.91	14.33	− 4 − 7	51.27	65.36	+ 8 − 5
2	8.80	20.25	− 9 + 5	59.94	19.52	− 3 − 8	53.75	14.08	0 − 9	51.28	65.05	+ 9 − 2
3	8.51	20.33	− 9 + 1	59.68	19.40	+ 1 − 9	53.59	13.82	+ 3 − 8	51.29	64.75	+ 8 + 1
4	8.22	20.39	− 8 − 3	59.41	19.27	+ 5 − 8	53.43	13.56	+ 7 − 7	51.31	64.44	+ 6 + 4
5	7.93	20.45	− 5 − 6	59.15	19.13	+ 8 − 5	53.28	13.30	+ 9 − 4	51.33	64.14	+ 2 + 6
6	7.64	20.50	− 1 − 8	58.89	18.99	+ 9 − 2	53.14	13.03	+ 9 0	*)51.36	63.83	− 2 + 7
7	7.34	20.55	+ 2 − 8	58.63	18.84	+ 9 + 1	53.00	12.76	+ 8 + 3	51.39	63.53	− 7 + 5
8	7.05	20.59	+ 6 − 7	58.38	18.69	+ 7 + 4	52.86	12.48	+ 5 + 6	51.43	63.22	−10 + 2
9	6.76	20.63	+ 8 − 5	58.13	18.53	+ 4 + 7	52.73	12.21	+ 1 + 7	51.47	62.92	−11 − 2
10	6.46	20.66	+ 9 − 1	57.88	18.36	− 1 + 8	52.61	11.93	− 4 + 7	51.52	62.62	−10 − 6
11	6.17	20.68	+ 8 + 2	57.64	18.19	− 5 + 7	52.49	11.65	− 8 + 5	51.58	62.32	− 7 − 9
12	5.88	20.69	+ 6 + 6	57.40	18.02	− 9 + 4	52.38	11.37	−10 + 1	51.65	62.03	− 2 −10
13	5.59	20.70	+ 2 + 7	57.16	17.84	−11 0	52.27	11.08	−11 − 3	51.72	61.73	+ 3 − 9
14	5.30	20.70	− 3 + 7	56.93	17.65	−11 − 5	52.16	10.79	− 9 − 7	51.79	61.44	+ 8 − 6
15	5.01	20.70	− 7 + 5	56.70	17.46	− 8 − 9	52.06	10.50	− 5 −10	51.87	61.15	+11 0
16	4.72	20.69	−10 + 2	56.48	17.27	− 3 −11	51.97	10.21	0 −10	51.96	60.86	+11 + 5
17	4.43	20.67	−11 − 3	56.26	17.07	+ 2 −10	51.88	9.91	+ 6 − 8	52.05	60.57	+ 9 + 9
18	4.14	20.64	−10 − 7	56.04	16.87	+ 7 − 7	51.80	9.61	+10 − 4	52.15	60.28	+ 5 +12
19	3.85	20.61	− 6 −10	55.82	16.66	+10 − 2	51.72	9.31	+11 + 1	52.25	59.99	0 +12
20	3.56	20.57	− 1 −11	55.61	16.44	+11 + 3	51.65	9.01	+11 + 6	52.36	59.71	− 4 +11
21	3.28	20.53	+ 4 −10	55.40	16.22	+10 + 8	51.59	8.71	+ 8 +10	52.47	59.43	− 8 + 7
22	2.99	20.48	+ 9 − 6	55.20	16.00	+ 6 +11	51.53	8.41	+ 3 +12	52.59	59.16	− 9 + 3
23	2.71	20.42	+11 0	55.00	15.78	+ 1 +12	51.48	8.11	− 2 +11	52.71	58.88	− 9 − 2
24	2.42	20.36	+11 + 5	54.81	15.55	− 4 +11	51.43	7.81	− 6 + 9	52.84	58.61	− 7 − 5
25	2.14	20.29	+ 8 + 9	54.62	15.31	− 7 + 7	51.39	7.50	− 9 + 5	52.97	58.34	− 3 − 8
26	1.86	20.22	+ 4 +12	54.44	15.07	− 9 + 3	51.36	7.19	− 9 + 1	53.11	58.07	+ 1 − 9
27	1.58	20.14	− 1 +12	54.26	14.83	− 9 − 1	51.33	6.89	− 8 − 4	53.25	57.81	+ 4 − 8
28	1.30	20.05	− 5 +10	54.08	14.58	− 7 − 5	51.31	6.58	− 5 − 7	53.40	57.55	+ 7 − 6
29	1.02	19.96	− 8 + 6	53.91	14.33	− 4 − 7	51.29	6.27	− 2 − 8	53.56	57.29	+ 9 − 3
30	0.75	19.86	− 9 + 2				51.28	5.97	+ 2 − 9	53.72	57.04	+ 9 0
31	0.48	19.75	− 8 − 2				51.27	5.66	+ 6 − 7	53.88	56.79	+ 7 + 3
32	0.21	19.64	− 6 − 6				51.27	5.36	+ 8 − 5			

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+85° 53′ 50″	13.977	+13.941	+85° 54′ 0″	13.986	+13.951	+85° 54′ 20″	14.005	+13.970
60	13.986	+13.951	10	13.996	+13.960	30	14.015	+13.979

$\alpha_{1933.0} = 0^h\ 59^m\ 13^s.84$ $\delta_{1933.0} = +85°\ 53'\ 55''.56$

*) Tag der doppelten unteren Kulmination: April 6

Na) 43 Hev. Cephei $4^m.52$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder	Juni AR.	Juni Dekl.	Juni ☾ Glieder	Juli AR.	Juli Dekl.	Juli ☾ Glieder	August AR.	August Dekl.	August ☾ Glieder
	$0^h 58^m$	+85° 53′	in 0.01s 0.01″	$0^h 59^m$	+85° 53′	in 0.01s 0.01″	$0^h 59^m$	+85° 53′	in 0.01s 0.01″	$0^h 59^m$	+85° 53′	in 0.01s 0.01″
1	53.88	56.79	+ 7 + 3	0.98	51.08	− 8 + 4	10.14	50.21	−11 − 7	19.65	54.46	+ 5 −10
2	54.05	56.54	+ 4 + 6	1.26	50.97	−11 0	10.45	50.27	− 8 −10	19.93	54.68	+ 9 − 6
3	54.22	56.30	0 + 7	1.54	50.87	−12 − 4	10.77	50.33	− 4 −12	20.21	54.90	+11 0
4	54.40	56.06	− 5 + 6	1.83	50.77	−10 − 8	11.09	50.40	+ 1 −11	20.49	55.12	+10 + 5
5	54.58	55.82	− 9 + 3	2.12	50.68	− 7 −11	11.41	50.48	+ 7 − 8	20.77	55.35	+ 7 + 9
6	54.77	55.59	−11 − 1	2.41	50.59	− 2 −12	11.73	50.56	+10 − 3	21.04	55.58	+ 3 +12
7	54.96	55.36	−11 − 5	2.70	50.51	+ 4 −10	12.05	50.65	+11 + 2	21.31	55.82	− 2 +11
8	55.15	55.13	− 9 − 9	3.00	50.43	+ 8 − 6	12.37	50.74	+10 + 8	21.58	56.06	− 6 + 9
9	55.35	54.91	− 4 −11	3.29	50.36	+11 0	12.69	50.83	+ 6 +11	21.85	56.31	− 9 + 5
10	55.55	54.70	+ 1 −10	3.59	50.29	+11 + 6	13.00	50.93	+ 1 +12	22.12	56.56	− 9 + 1
11	55.76	54.49	+ 6 − 7	3.89	50.23	+ 9 +10	13.32	51.04	− 4 +11	22.38	56.82	− 8 − 3
12	55.97	54.28	+10 − 3	4.19	50.18	+ 4 +13	13.63	51.15	− 7 + 8	22.64	57.08	− 5 − 6
13	56.19	54.07	+12 + 3	4.50	50.13	− 1 +12	13.95	51.27	− 9 + 4	22.90	57.35	− 1 − 7
14	56.41	53.87	+11 + 8	4.80	50.09	− 5 +11	14.26	51.39	− 9 0	23.15	57.62	+ 3 − 6
15	56.64	53.68	+ 7 +11	5.11	50.05	− 8 + 7	14.57	51.52	− 7 − 4	23.40	57.89	+ 7 − 5
16	56.87	53.49	+ 2 +13	5.42	50.02	− 9 + 2	14.88	51.65	− 3 − 7	23.65	58.16	+ 9 − 3
17	57.10	53.30	− 3 +12	5.73	49.99	− 8 − 2	15.19	51.79	+ 1 − 7	23.90	58.44	+ 9 0
18	57.33	53.12	− 7 + 9	6.04	49.97	− 6 − 5	15.49	51.93	+ 4 − 7	24.14	58.72	+ 9 + 3
19	57.57	52.94	− 9 + 5	6.35	49.95	− 2 − 7	15.80	52.08	+ 8 − 5	24.38	59.01	+ 6 + 6
20	57.81	52.76	− 9 0	6.66	49.94	+ 2 − 7	16.11	52.23	+ 9 − 2	24.62	59.30	+ 2 + 7
21	58.06	52.59	− 8 − 4	6.97	49.94	+ 6 − 7	16.41	52.39	+ 9 + 1	24.85	59.59	− 2 + 7
22	58.31	52.43	− 4 − 7	7.28	49.94	+ 8 − 4	16.71	52.55	+ 8 + 4	25.08	59.89	− 6 + 6
23	58.56	52.27	0 − 8	7.60	49.95	+ 9 − 1	17.01	52.72	+ 5 + 6	25.30	60.19	−10 + 2
24	58.82	52.12	+ 3 − 8	7.92	49.96	+ 9 + 2	17.31	52.90	+ 1 + 7	25.52	60.49	−11 − 2
25	59.08	51.97	+ 6 − 6	8.23	49.98	+ 7 + 5	17.61	53.08	− 4 + 7	25.74	60.80	−10 − 6
26	59.34	51.83	+ 8 − 4	8.55	50.01	+ 3 + 7	17.91	53.26	− 8 + 4	25.96	61.11	− 7 −10
27	59.61	51.69	+ 9 − 1	8.87	50.04	− 1 + 7	18.21	53.45	−11 0	26.17	61.42	− 3 −11
28	59.88	51.56	+ 8 + 2	9.18	50.07	− 6 + 5	18.50	53.64	−11 − 4	26.38	61.74	+ 3 −11
29	60.15	51.43	+ 5 + 5	9.50	50.11	− 9 + 2	18.79	53.84	−10 − 9	26.59	62.06	+ 7 − 7
30	60.42	51.31	+ 1 + 6	9.82	50.16	−11 − 2	19.08	54.04	− 6 −11	26.79	62.38	+10 − 2
31	60.70	51.19	− 3 + 6	10.14	50.21	−11 − 7	19.36	54.25	− 1 −12	26.99	62.71	+11 + 3
32	60.98	51.08	− 8 + 4				19.65	54.46	+ 5 −10	27.19	63.04	+ 9 + 8

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+85° 53′ 40″	13.968	+13.932	+85° 53′ 50″	13.977	+13.941	+85° 54′ 0″	13.986	+13.951
50	13.977	+13.941	60	13.986	+13.951	10	13.996	+13.960

$\alpha_{1933.0} = 0^h\ 59^m\ 13^s.84$ $\delta_{1933.0} = +85°\ 53'\ 55''.56$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Na) 43 Hev. Cephei $4^{m}.52$

Tag	September AR.	September Dekl.	September ☾ Glieder		Oktober AR.	Oktober Dekl.	Oktober ☾ Glieder	
	$0^h 59^m$	$+85° 54'$	in $0^s.01$	in $0''.01$	$0^h 59^m$	$+85° 54'$	in $0^s.01$	in $0''.01$
1	$27^s.19$	$3''.04$	+9	+8	$31^s.23$	$13''.91$	−3	+10
2	27.38	3.37	+5	+11	31.30	14.30	−7	+8
3	27.57	3.70	0	+11	31.36	14.68	−9	+4
4	27.75	4.04	−5	+10	31.42	15.07	−9	−1
5	27.93	4.38	−8	+7	31.47	15.45	−7	−4
6	28.11	4.73	−10	+2	{31.52 {31.56	15.84 16.22	−4 0	−7} −8}
7	28.28	5.07	−9	−2	31.60	16.61	+4	−7
8	28.45	5.42	−6	−5	31.64	17.00	+7	−5
9	28.62	5.77	−2	−7	31.67	17.38	+9	−3
10	28.78	6.12	+2	−8	31.70	17.77	+9	+1
11	28.94	6.48	+6	−7	31.73	18.16	+7	+4
12	29.09	6.83	+8	−4	31.75	18.54	+5	+6
13	29.24	7.19	+9	−1	31.77	18.93	+1	+7
14	29.39	7.55	+9	+2	31.78	19.32	−3	+6
15	29.53	7.92	+7	+5	31.78	19.70	−7	+4
16	29.67	8.28	+4	+7	31.78	20.09	−10	+1
17	29.80	8.65	0	+7	31.78	20.47	−11	−3
18	29.93	9.02	−5	+6	31.77	20.85	−10	−7
19	30.06	9.39	−8	+4	31.76	21.24	−6	−10
20	30.18	9.76	−11	0	31.74	21.62	−1	−11
21	30.30	10.13	−11	−5	31.72	22.00	+4	−9
22	30.41	10.50	−8	−8	31.69	22.38	+8	−6
23	30.52	10.88	−4	−10	31.66	22.75	+11	−1
24	30.62	11.25	+1	−11	31.62	23.13	+11	+5
25	30.72	11.62	+6	−8	31.58	23.51	+8	+9
26	30.82	12.00	+10	−4	31.53	23.88	+4	+12
27	30.91	12.38	+11	+1	31.48	24.25	−1	+11
28	30.99	12.76	+10	+6	31.43	24.62	−6	+10
29	31.07	13.15	+6	+10	31.37	24.99	−9	+6
30	31.15	13.53	+2	+12	31.31	25.35	−10	+1
31	31.23	13.91	−3	+10	31.24	25.72	−8	−3
32					31.17	26.08	−5	−6

Tag	November AR.	November Dekl.	November ☾ Glieder		Dezember AR.	Dezember Dekl.	Dezember ☾ Glieder	
	$0^h 59^m$	$+85° 54'$	in $0^s.01$	in $0''.01$	$0^h 59^m$	$+85° 54'$	in $0^s.01$	in $0''.01$
1	$31^s.17$	$26''.08$	−5	−6	$26^s.90$	$35''.61$	+5	−6
2	31.09	26.44	−1	−8	26.69	35.87	+8	−4
3	31.01	26.80	+3	−8	26.48	36.12	+9	−1
4	30.92	27.16	+7	−6	26.27	36.37	+9	+2
5	30.83	27.51	+8	−3	26.05	36.61	+7	+4
6	30.73	27.86	+9	0	25.83	36.85	+4	+6
7	30.63	28.21	+8	+2	25.61	37.08	0	+7
8	30.52	28.56	+6	+5	25.38	37.31	−4	+6
9	30.41	28.91	+3	+6	25.15	37.53	−8	+3
10	30.29	29.25	−2	+6	24.92	37.75	−11	−1
11	30.17	29.59	−6	+5	24.68	37.96	−11	−5
12	30.05	29.92	−9	+2	24.44	38.17	−9	−9
13	29.92	30.25	−11	−2	24.20	38.37	−6	−12
14	29.79	30.58	−10	−6	23.96	38.57	−1	−12
15	29.65	30.91	−8	−10	23.71	38.76	+4	−10
16	29.51	31.23	−4	−11	23.46	38.94	+9	−6
17	29.36	31.55	+2	−11	23.21	39.12	+10	0
18	29.21	31.87	+6	−8	22.95	39.29	+10	+5
19	29.06	32.18	+10	−3	22.69	39.46	+8	+10
20	28.90	32.49	+11	+3	22.43	39.62	+3	+12
21	28.74	32.79	+10	+8	22.17	39.77	−2	+12
22	28.57	33.09	+6	+11	21.90	39.92	−6	+10
23	28.40	33.39	+1	+13	21.64	40.06	−9	+6
24	28.23	33.68	−4	+11	21.37	40.20	−9	+1
25	28.05	33.97	−8	+8	21.09	40.33	−7	−3
26	27.87	34.25	−9	+4	20.82	40.45	−4	−6
27	27.68	34.53	−9	−1	20.55	40.57	0	−7
28	27.49	34.81	−7	−5	20.27	40.69	+4	−7
29	27.30	35.08	−3	−7	19.99	40.80	+7	−5
30	27.10	35.35	+1	−7	19.72	40.90	+9	−2
31	26.90	35.61	+5	−6	19.44	40.99	+9	+1
32					19.15	41.08	+8	+4

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+85° 54′ 0″	13.986	+13.951	+85° 54′20″	14.005	+13.970	+85° 54′40″	14.024	+13.989
10	13.996	+13.960	30	14.015	+13.979	50	14.034	+13.998

$\alpha_{1933.0} = 0^h\ 59^m\ 13^s.84 \qquad \delta_{1933.0} = +85°\ 53'\ 55''.56$

Nb) α Ursae minoris $2^m.12$

Tag	Januar			Februar			März			April		
	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder
	$1^h 37^m$	$+88° 57'$	in 0.01^s $0.01''$	$1^h 37^m$	$+88° 57'$	in 0.01^s $0.01''$	$1^h 37^m$	$+88° 56'$	in 0.01^s $0.01''$	$1^h 37^m$	$+88° 56'$	in 0.01^s $0.01''$
1	87.50^s	$2.73''$	−22 +10	52.29^s	$4.08''$	−24 − 5	24.29^s	$60.11''$	−17 − 7	8.11^s	$51.77''$	+29 − 6
2	86.43	2.87	−31 + 7	51.16	4.02	−12 − 7	23.48	59.89	− 3 − 9	7.92	51.46	+33 − 4
3	85.34	3.00	−34 + 2	50.04	3.95	+ 3 − 9	22.68	59.67	+11 − 9	7.76	51.15	+31 0
4	84.25	3.13	−29 − 2	48.93	3.88	+16 − 8	21.90	59.44	+23 − 8	7.62	50.85	+23 + 3
5	83.15	3.25	−20 − 6	47.82	3.80	+27 − 7	21.15	59.21	+32 − 5	7.50	50.54	+10 + 6
6	82.05	3.37	− 7 − 8	46.72	3.71	+34 − 4	20.41	58.97	+34 − 2	7.40	50.24	− 7 + 7
7	80.93	3.48	+ 7 − 8	45.63	3.62	+33 0	19.69	58.73	+30 + 2	7.33	49.93	−23 + 6
8	79.81	3.58	+21 − 8	44.54	3.52	+27 + 3	18.98	58.49	+20 + 5	7.28	49.62	−37 + 4
9	78.69	3.68	+30 − 6	43.46	3.41	+15 + 6	18.29	58.24	+ 4 + 7	7.25	49.32	−43 0
10	77.56	3.77	+34 − 3	42.39	3.30	− 2 + 8	17.62	57.99	−13 + 8	7.25	49.01	−40 − 4
11	76.43	3.85	+32 + 1	41.33	3.18	−19 + 8	16.98	57.74	−28 + 6	7.26	48.71	−28 − 8
12	75.29	3.93	+23 + 5	40.28	3.06	−33 + 5	16.35	57.48	−39 + 3	7.30	48.40	− 9 −10
13	74.15	4.00	+ 9 + 7	39.24	2.93	−42 + 1	15.74	57.22	−42 − 1	7.36	48.09	+11 −10
14	73.00	4.06	− 9 + 8	38.21	2.79	−41 − 3	15.15	56.96	−35 − 6	7.45	47.79	+30 − 7
15	71.85	4.12	−26 + 6	37.19	2.65	−31 − 8	14.58	56.69	−21 − 9	7.55	47.48	+41 − 2
16	70.70	4.17	−38 + 3	36.18	2.50	−14 −10	14.03	56.42	− 1 −10	*)7.68	47.18	+43 + 3
17	69.55	4.21	−43 − 1	35.19	2.35	+ 6 −10	13.50	56.14	+19 − 9	7.83	46.87	+36 + 8
18	68.39	4.25	−39 − 6	34.20	2.19	+26 − 8	12.99	55.86	+35 − 6	8.00	46.57	+21 +11
19	67.23	4.28	−26 − 9	33.23	2.03	+39 − 4	12.50	55.58	+43 − 1	8.20	46.26	+ 3 +13
20	66.08	4.30	− 7 −11	32.28	1.86	+42 + 1	12.04	55.30	+41 + 5	8.41	45.96	−15 +11
21	64.92	4.32	+14 −10	31.33	1.68	+37 + 6	11.59	55.01	+30 + 9	8.65	45.67	−28 + 8
22	63.76	4.33	+31 − 7	30.40	1.50	+24 +10	11.17	54.73	+13 +12	8.91	45.37	−34 + 4
23	62.60	4.33	+41 − 2	29.48	1.32	+ 6 +12	10.76	54.44	− 5 +12	9.19	45.07	−33 0
24	61.45	4.33	+42 + 3	28.58	1.13	−12 +11	10.38	54.15	−21 +10	9.49	44.78	−25 − 4
25	60.29	4.32	+33 + 8	27.69	0.94	−26 + 9	10.02	53.86	−32 + 6	9.81	44.49	−13 − 7
26	59.14	4.31	+18 +11	26.82	0.74	−34 + 5	9.68	53.56	−35 + 2	10.15	44.20	+ 1 − 9
27	57.99	4.29	− 1 +12	25.96	0.53	−33 0	9.36	53.27	−31 − 2	10.52	43.91	+15 − 9
28	56.84	4.26	−18 +11	25.12	0.32	−28 − 4	9.07	52.97	−22 − 6	10.91	43.62	+26 − 7
29	55.70	4.22	−29 + 8	24.29	0.11	−17 − 7	8.80	52.67	− 8 − 8	11.31	43.34	+32 − 5
30	54.56	4.18	−34 + 3				8.54	52.37	+ 6 − 9	11.74	43.06	+33 − 1
31	53.42	4.13	−32 − 1				8.31	52.07	+19 − 8	12.18	42.78	+27 + 2
32	52.29	4.08	−24 − 5				8.11	51.77	+29 − 6			

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+88° 56′ 40″	54.283	+54.274	+88° 56′ 50″	54.426	+54.417	+88° 57′ 0″	54.570	+54.561
50	54.426	+54.417	60	54.570	+54.561	10	54.715	+54.706

$\alpha_{1933.0} = 1^h\ 38^m\ 31^s.57$ $\delta_{1933.0} = +88°\ 56'\ 37.''41$

*) Tag der doppelten unteren Kulmination: April 16

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Nb) α Ursae minoris $2^m.12$

Tag	Mai			Juni			Juli			August		
	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder
	$1^h 37^m$	+88° 56′	in 0.01s | 0.01″	$1^h 37^m$	+88° 56′	in 0.01s | 0.01″	$1^h 38^m$	+88° 56′	in 0.01s | 0.01″	$1^h 38^m$	+88° 56′	in 0.01s | 0.01″
1	12.18	42.78	+27 +2	34.88	35.73	−28 +5	8.25	33.09	−43 −5	46.08	35.40	+16 −11
2	12.65	42.50	+15 +5	35.86	35.57	−40 +2	9.46	33.08	−33 −9	47.26	35.56	+32 −7
3	13.13	42.23	−1 +7	36.84	35.41	−44 −2	10.68	33.08	−16 −12	48.44	35.72	+40 −2
4	13.64	41.95	−18 +6	37.84	35.26	−40 −6	11.90	33.08	+4 −12	49.61	35.89	+39 +3
5	14.16	41.68	−33 +4	38.86	35.11	−27 −10	13.12	33.09	+23 −9	50.78	36.06	+29 +8
6	14.71	41.42	−42 +1	39.88	34.96	−7 −11	14.34	33.11	+37 −5	51.94	36.24	+13 +11
7	15.27	41.15	−43 −3	40.91	34.82	+13 −10	15.56	33.13	+42 +1	53.10	36.42	−5 +12
8	15.85	40.89	−34 −7	41.96	34.69	+31 −7	16.79	33.16	+37 +6	54.25	36.61	−21 +10
9	16.46	40.63	−18 −10	43.01	34.56	+41 −2	18.02	33.19	+24 +10	55.39	36.80	−32 +7
10	17.08	40.38	+2 −10	44.08	34.44	+42 +4	19.25	33.23	+7 +12	56.53	37.00	−34 +3
11	17.71	40.13	+22 −9	45.15	34.33	+34 +9	20.48	33.27	−11 +12	57.66	37.20	−30 −2
12	18.37	39.88	+37 −4	46.23	34.22	+18 +12	21.71	33.32	−25 +10	58.78	37.41	−18 −5
13	19.05	39.63	+44 +1	47.32	34.11	0 +13	22.94	33.37	−33 +6	59.90	37.62	−4 −7
14	19.74	39.39	+41 +6	48.43	34.01	−17 +12	24.18	33.43	−32 +1	61.00	37.83	+10 −8
15	20.45	39.15	+29 +10	49.54	33.91	−29 +8	25.41	33.50	−25 −3	62.10	38.05	+24 −7
16	21.17	38.92	+11 +13	50.66	33.82	−33 +4	26.65	33.57	−13 −6	63.19	38.27	+32 −5
17	21.91	38.69	−7 +13	51.79	33.73	−31 −1	27.88	33.64	+1 −8	64.27	38.50	+35 −2
18	22.67	38.46	−23 +10	52.92	33.65	−22 −5	29.11	33.72	+16 −8	65.35	38.73	+33 +2
19	23.44	38.24	−32 +6	54.06	33.57	−8 −7	30.34	33.81	+27 −6	66.41	38.97	+23 +5
20	24.23	38.02	−34 +2	55.21	33.50	+6 −8	31.57	33.90	+34 −4	67.47	39.21	+10 +7
21	25.04	37.80	−28 −3	56.37	33.44	+20 −7	32.79	34.00	+34 0	68.52	39.45	−6 +8
22	25.86	37.59	−17 −6	57.53	33.38	+29 −6	34.01	34.10	+29 +3	69.55	39.70	−23 +7
23	26.70	37.38	−3 −8	58.70	33.32	+34 −3	35.23	34.21	+18 +6	70.58	39.95	−36 +4
24	27.55	37.18	+11 −8	59.88	33.27	+33 0	36.45	34.32	+3 +7	71.59	40.21	−42 0
25	28.42	36.98	+23 −7	61.06	33.23	+25 +4	37.67	34.44	−13 +7	72.60	40.47	−40 −5
26	29.30	36.79	+31 −5	62.25	33.19	+13 +6	38.88	34.56	−29 +6	73.60	40.73	−29 −9
27	30.20	36.60	+34 −2	63.44	33.16	−3 +7	40.09	34.69	−40 +2	74.58	41.00	−12 −11
28	31.11	36.42	+30 +1	64.64	33.13	−21 +6	41.30	34.82	−43 −2	75.56	41.27	+8 −11
29	32.04	36.24	+20 +4	65.84	33.11	−35 +4	42.50	34.96	−37 −7	76.52	41.55	+26 −9
30	32.97	36.07	+6 +6	67.04	33.10	−43 0	43.70	35.10	−24 −10	77.48	41.83	+37 −4
31	33.92	35.90	−11 +7	68.25	33.09	−43 −5	44.89	35.25	−5 −12	78.42	42.11	+40 +1
32	34.88	35.73	−28 +5				46.08	35.40	+16 −11	79.35	42.40	+34 +6

δ	sec δ	tg δ	δ	sec δ	tg δ
+88° 56′ 30″	54.141	+54.132	+88° 56′ 40″	54.283	+54.274
40	54.283	+54.274	50	54.426	+54.417

$\alpha_{1933.0} = 1^h\ 38^m\ 31^s.57$ $\delta_{1933.0} = +88°\ 56'\ 37''.41$

Obere Kulmination Greenwich

Nb) α Ursae minoris $2^m.12$

Tag	September				Oktober				November				Dezember			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	$1^h 39^m$	+88° 56′	in 0.01s	in 0.01″	$1^h 39^m$	+88° 56′	in 0.01s	in 0.01″	$1^h 39^m$	+88° 57′	in 0.01s	in 0.01″	$1^h 39^m$	+88° 57′	in 0.01s	in 0.01″
1	19.35	42.40	+34	+6	41.07	52.39	−10	+11	47.97	4.54	−21	−5	36.91	14.98	+18	−7
2	20.27	42.69	+19	+10	41.56	52.76	−25	+9	47.88	4.92	−6	−8	36.26	15.28	+29	−6
3	21.18	42.98	+1	+12	42.03	53.13	−34	+5	47.77	5.29	+9	−8	35.59	15.58	+34	−3
4	22.07	43.28	−17	+11	42.49	53.50	−35	+1	47.64	5.67	+22	−7	34.90	15.87	+34	0
5	22.95	43.58	−29	+8	42.93	53.87	−28	−3	47.49	6.04	+31	−5	34.20	16.16	+28	+3
6	23.82	43.88	−35	+4	43.36	54.25	−16	−6	47.32	6.42	+35	−2	33.48	16.45	+16	+6
7	24.68	44.19	−32	−1	43.77	54.62	−1	−8	47.13	6.79	+32	+1	32.74	16.73	+1	+7
8	25.53	44.50	−23	−4	44.16	55.00	+14	−8	46.92	7.16	+23	+4	31.99	17.00	−15	+6
9	26.36	44.82	−10	−7	44.53	55.38	+25	−7	46.70	7.53	+10	+6	31.22	17.27	−30	+4
10	27.18	45.13	+5	−8	44.88	55.76	+33	−4	46.45	7.89	−5	+7	30.44	17.54	−40	+1
11	27.99	45.45	+19	−8	45.22	56.14	+34	−1	46.19	8.26	−22	+6	29.64	17.80	−43	−3
12	28.78	45.77	+29	−6	45.54	56.52	+29	+2	45.90	8.62	−35	+3	28.82	18.06	−37	−7
13	29.56	46.10	+34	−3	45.84	56.90	+19	+5	45.60	8.98	−42	0	27.99	18.31	−23	−11
14	30.33	46.43	+33	0	46.12	57.28	+5	+7	45.27	9.33	−41	−5	27.14	18.56	−5	−12
15	31.08	46.76	+27	+4	46.38	57.66	−11	+7	44.93	9.69	−31	−8	26.28	18.80	+14	−11
16	31.82	47.10	+15	+6	{46.63 {46.86	58.04 58.43	−26 −38	+6} +3}	44.56	10.04	−15	−11	25.41	19.04	+31	−7
17	32.54	47.44	0	+7	47.07	58.81	−42	−1	44.18	10.39	+4	−11	24.52	19.28	+40	−2
18	33.25	47.78	−17	+7	47.26	59.19	−38	−6	43.78	10.74	+24	−9	23.61	19.51	+39	+4
19	33.94	48.12	−31	+5	47.43	59.57	−26	−9	43.36	11.08	+37	−4	22.69	19.73	+30	+9
20	34.62	48.46	−40	+2	47.58	59.96	−7	−11	42.93	11.42	+42	+1	21.76	19.95	+14	+13
21	35.29	48.81	−41	−3	47.72	60.34	+13	−10	42.47	11.76	+37	+6	20.82	20.16	−5	+13
22	35.94	49.16	−33	−7	47.84	60.73	+30	−7	42.00	12.10	+24	+11	19.86	20.36	−21	+11
23	36.57	49.51	−18	−10	47.94	61.11	+40	−2	41.51	12.44	+6	+13	18.89	20.56	−31	+7
24	37.19	49.86	+1	−11	48.02	61.49	+41	+3	40.99	12.77	−12	+12	17.92	20.76	−34	+3
25	37.79	50.22	+21	−9	48.08	61.88	+32	+8	40.46	13.10	−27	+9	16.93	20.95	−28	−2
26	38.38	50.57	+35	−6	48.13	62.26	+16	+11	39.92	13.42	−34	+5	15.92	21.13	−16	−5
27	38.95	50.93	+41	0	48.15	62.65	−2	+11	39.35	13.74	−33	0	14.91	21.31	−1	−7
28	39.50	51.30	+38	+5	48.15	63.03	−20	+11	38.77	14.06	−25	−4	13.89	21.48	+14	−7
29	40.04	51.66	+26	+9	48.14	63.41	−31	+7	38.17	14.37	−12	−7	12.86	21.65	+26	−6
30	40.56	52.02	+9	+11	48.10	63.79	−35	+3	37.55	14.68	−4	−8	11.81	21.81	+34	−4
31	41.07	52.39	−10	+11	48.05	64.16	−32	−2	36.91	14.98	+18	−7	10.76	21.96	+36	−1
32					47.97	64.54	−21	−5					9.70	22.11	+31	+2

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+88° 56′ 40″	54.283	+54.274	+88° 57′ 0″	54.570	+54.561	+88° 57′ 20″	54.861	+54.852
50	54.426	+54.417	10	54.715	+54.706	30	55.007	+54.998

$\alpha_{1933.0} = 1^h\ 38^m\ 31^s.57$ $\delta_{1933.0} = +88°\ 56'\ 37''.41$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Nc) Grb 750 $6^m.70$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder in		Februar AR.	Februar Dekl.	Februar ☾ Glieder in		März AR.	März Dekl.	März ☾ Glieder in		April AR.	April Dekl.	April ☾ Glieder in	
	$4^h 14^m$	$+85° 22'$	$0^s.01$	$0''.01$	$4^h 14^m$	$+85° 23'$	$0^s.01$	$0''.01$	$4^h 14^m$	$+85° 23'$	$0^s.01$	$0''.01$	$4^h 14^m$	$+85° 22'$	$0^s.01$	$0''.01$
1	$59^s.62$	$55''.67$	+2	+12	$54^s.41$	$2''.59$	−7	0	$47^s.61$	$4''.26$	−7	−3	$40^s.54$	$60''.66$	+2	−10
2	59.51	55.96	−2	+10	54.19	2.73	−7	−4	47.36	4.23	−6	−7	40.35	60.46	+4	−8
3	59.40	56.24	−5	+7	53.96	2.87	−5	−8	47.11	4.20	−3	−9	40.17	60.26	+6	−5
4	59.29	56.52	−7	+3	53.73	3.00	−2	−10	46.86	4.16	0	−10	39.99	60.05	+7	−1
5	59.17	56.80	−7	−2	53.50	3.12	+1	−10	46.61	4.11	+3	−9	39.82	59.84	+5	+4
6	59.04	57.07	−6	−6	53.27	3.24	+4	−9	46.36	4.06	+5	−7	39.65	59.62	+3	+7
7	58.91	57.34	−4	−9	53.04	3.35	+6	−6	46.11	4.00	+7	−3	39.48	59.40	−1	+9
8	58.77	57.61	−1	−10	52.80	3.46	+7	−1	45.86	3.93	+7	+1	39.31	59.18	−5	+9
9	58.63	57.87	+2	−10	52.57	3.56	+7	+3	45.61	3.86	+5	+5	39.15	58.95	−8	+7
10	58.49	58.13	+5	−8	52.33	3.65	+4	+7	45.37	3.78	+2	+9	39.00	58.72	−10	+3
11	58.34	58.38	+7	−4	52.09	3.74	0	+9	45.13	3.70	−2	+10	38.85	58.48	−10	−2
12	58.19	58.63	+7	0	51.85	3.82	−3	+10	44.89	3.61	−6	+9	38.70	58.24	−8	−7
13	58.04	58.87	+6	+5	51.60	3.90	−7	+8	44.65	3.51	−9	+6	38.55	58.00	−3	−10
14	57.88	59.11	+3	+8	51.36	3.97	−10	+4	44.41	3.41	−10	+1	38.41	57.76	+2	−11
15	57.72	59.35	−1	+10	51.11	4.03	−11	−1	44.17	3.30	−9	−4	38.28	57.51	+7	−9
16	57.56	59.58	−5	+9	50.86	4.09	−9	−6	43.94	3.19	−6	−8	38.15	57.26	+10	−5
17	57.39	59.81	−9	+6	50.61	4.14	−5	−10	43.71	3.07	−1	−11	38.02	57.00	+12	+1
18	57.22	60.03	−11	+1	50.36	4.18	0	−11	43.48	2.95	+4	−10	37.90	56.74	+11	+6
19	57.04	60.25	−11	−4	50.11	4.22	+5	−10	43.25	2.82	+8	−7	37.78	56.48	+8	+10
20	56.86	60.46	−8	−8	49.86	4.25	+9	−6	43.02	2.69	+11	−3	37.67	56.22	+4	+12
21	56.67	60.67	−3	−11	49.61	4.28	+11	−1	42.80	2.55	+11	+3	37.56	55.96	−1	+11
22	56.48	60.87	+2	−11	49.36	4.30	+11	+4	42.58	2.40	+10	+7	37.46	55.69	−4	+9
23	56.29	61.07	+7	−8	49.11	4.31	+8	+9	42.37	2.25	+6	+10	37.36	55.42	−7	+5
24	56.09	61.26	+10	−4	48.86	4.32	+4	+11	42.15	2.09	+2	+11	37.26	55.15	−8	0
25	55.89	61.44	+11	+1	48.61	4.32	0	+11	41.94	1.93	−2	+10	37.17	54.87	−7	−4
26	55.69	61.62	+10	+7	48.36	4.32	−4	+9	41.73	1.76	−5	+7	37.08	54.59	−5	−8
27	55.48	61.80	+7	+10	48.11	4.31	−6	+6	41.52	1.59	−7	+3	37.00	54.31	−2	−10
28	55.27	61.97	+3	+12	47.86	4.29	−8	+1	41.32	1.41	−8	−1	36.92	54.03	+1	−10
29	55.06	62.13	−1	+11	47.61	4.26	−7	−3	41.12	1.23	−6	−6	36.85	53.74	+4	−9
30	54.85	62.29	−4	+8					40.92	1.04	−4	−8	36.78	53.46	+6	−6
31	54.63	62.44	−7	+4					40.73	0.85	−1	−10	36.72	53.17	+6	−2
32	54.41	62.59	−7	0					40.54	0.66	+2	−10				

δ	sec δ	tg δ	δ	sec δ	tg δ
$+85° 22' 50''$	12.417	+12.376	$+85° 23' 0''$	12.424	+12.384
60	12.424	+12.384	10	12 432	+12.391

$\alpha_{1933.0} = 4^h\ 14^m\ 46^s.80$ $\delta_{1933.0} = +85°\ 22'\ 35''.35$

Nc) Grb 750 $6^m.70$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder	Juni AR.	Juni Dekl.	Juni ☾ Glieder	Juli AR.	Juli Dekl.	Juli ☾ Glieder	August AR.	August Dekl.	August ☾ Glieder
	$4^h 14^m$	+85° 22′	in $0^s.01$ | $0''.01$	$4^h 14^m$	+85° 22′	in $0^s.01$ | $0''.01$	$4^h 14^m$	+85° 22′	in $0^s.01$ | $0''.01$	$4^h 14^m$	+85° 22′	in $0^s.01$ | $0''.01$
1	36.72	53.17	+ 6 − 2	37.28	44.07	− 2 + 9	42.06	36.55	−11 + 3	50.23	32.10	− 3 −11
2	36.66	52.88	+ 6 + 2	37.38	43.79	− 7 + 8	42.28	36.34	−12 − 2	50.53	32.03	+ 2 −11
3	36.61	52.60	+ 4 + 6	37.48	43.50	−10 + 5	42.50	36.14	−10 − 7	50.83	31.96	+ 6 − 8
4	36.56	52.31	0 + 8	37.59	43.22	−12 + 1	42.73	35.94	− 6 −10	51.13	31.89	+10 − 3
5	36.52	52.02	− 4 + 9	37.70	42.94	−11 − 4	42.96	35.75	− 1 −11	51.44	31.83	+11 + 2
6	36.48	51.73	− 8 + 8	37.81	42.66	− 8 − 8	43.20	35.56	+ 4 −10	51.75	31.78	+ 9 + 7
7	36.45	51.43	−10 + 4	37.93	42.38	− 4 −11	43.44	35.37	+ 9 − 6	52.05	31.73	+ 6 +11
8	36.42	51.13	−11 0	38.05	42.11	+ 2 −11	43.68	35.19	+11 − 1	52.36	31.68	+ 2 +12
9	36.40	50.84	− 9 − 5	38.18	41.84	+ 7 − 8	43.92	35.01	+11 + 5	52.67	31.64	− 2 +11
10	36.38	50.54	− 6 − 9	38.31	41.57	+11 − 4	44.17	34.84	+ 9 + 9	52.98	31.60	− 5 + 7
11	36.37	50.25	− 1 −11	38.45	41.30	+12 + 2	44.42	34.67	+ 5 +12	53.29	31.57	− 7 + 3
12	36.36	49.95	+ 5 −10	38.59	41.04	+11 + 7	44.67	34.51	+ 1 +12	53.61	31.54	− 7 − 2
13	36.36	49.65	+ 9 − 6	38.74	40.78	+ 8 +11	44.93	34.35	− 3 +10	53.92	31.52	− 5 − 5
14	36.36	49.35	+12 − 1	38.89	40.52	+ 4 +12	45.19	34.19	− 6 + 6	54.23	31.50	− 3 − 8
15	36.37	49.06	+12 + 4	39.04	40.26	− 1 +11	45.45	34.04	− 7 + 1	54.55	31.49	0 −10
16	36.39	48.76	+10 + 9	39.20	40.01	− 4 + 8	45.71	33.89	− 6 − 3	54.87	31.48	+ 3 − 9
17	36.41	48.46	+ 6 +11	39.36	39.76	− 6 + 4	45.97	33.75	− 4 − 7	55.18	31.48	+ 6 − 7
18	36.43	48.16	+ 2 +12	39.53	39.51	− 7 0	46.24	33.61	− 2 − 8	55.50	31.48	+ 8 − 4
19	36.46	47.87	− 2 +10	39.70	39.26	− 6 − 5	46.51	33.48	+ 1 −10	55.82	31.49	+ 7 0
20	36.49	47.57	− 6 + 7	39.87	39.02	− 4 − 8	46.78	33.35	+ 4 − 8	56.14	31.50	+ 6 + 5
21	36.53	47.28	− 7 + 2	40.05	38.78	− 1 − 9	47.06	33.22	+ 6 − 6	56.45	31.52	+ 3 + 7
22	36.58	46.98	− 7 − 2	40.23	38.54	+ 2 − 9	47.33	33.10	+ 7 − 2	56.77	31.54	− 1 + 9
23	36.63	46.69	− 5 − 6	40.42	38.31	+ 5 − 8	47.61	32.98	+ 7 + 2	57.09	31.56	− 5 + 9
24	36.68	46.39	− 3 − 9	40.61	38.08	+ 7 − 5	47.89	32.86	+ 5 + 6	57.41	31.59	− 8 + 7
25	36.74	46.10	0 −10	40.80	37.85	+ 7 − 1	48.18	32.75	+ 2 + 8	57.73	31.62	−11 + 2
26	*)36.80	45.80	+ 3 − 9	41.00	37.62	+ 6 + 3	48.47	32.64	− 3 + 9	58.05	31.66	−11 − 2
27	36.87	45.51	+ 5 − 7	41.21	37.40	+ 3 + 6	48.76	32.54	− 7 + 8	58.37	31.70	− 9 − 7
28	36.94	45.22	+ 7 − 4	41.42	37.18	− 1 + 9	49.05	32.44	−10 + 5	58.69	31.75	− 5 −10
29	37.02	44.93	+ 6 0	41.63	36.97	− 5 + 9	49.34	32.35	−12 0	59.01	31.81	0 −11
30	37.10	44.64	+ 5 + 4	41.84	36.76	− 9 + 7	49.63	32.26	−11 − 5	59.33	31.87	+ 5 − 9
31	37.19	44.36	+ 2 + 7	42.06	36.55	−11 + 3	49.93	32.18	− 8 − 9	59.65	31.93	+ 9 − 5
32	37.28	44.07	− 2 + 9				50.23	32.10	− 3 −11	59.97	31.99	+10 0

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+85° 22′ 30″	12.402	+12.361	+85° 22′ 40″	12.409	+12.369	+85° 22′ 50″	12.417	+12.376
40	12.409	+12.369	50	12.417	+12.376	60	12.424	+12.384

$\alpha_{1933.0} = 4^h\ 14^m\ 46^s.80$ $\delta_{1933.0} = +85°\ 22'\ 35''.35$

*) Tag der doppelten unteren Kulmination: Mai 26

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Nc) Grb 750 $6^m.70$

Tag	September				Oktober				November				Dezember			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	$4^h 14^m$	+85° 22′	in $0^s.01$	in 0″.01	$4^h 15^m$	+85° 22′	in $0^s.01$	in 0″.01	$4^h 15^m$	+85° 22′	in $0^s.01$	in 0″.01	$4^h 15^m$	+85° 22′	in $0^s.01$	in 0″.01
1	59.97	31.99	+10	0	9.18	36.08	+ 5	+11	16.71	43.98	− 7	+ 4	20.64	54.10	− 1	− 9
2	60.29	32.06	+10	+ 5	9.46	36.28	+ 1	+12	16.90	44.28	− 7	− 1	20.69	54.44	+ 2	− 9
3	60.61	32.14	+ 7	+ 9	9.74	36.49	− 3	+10	17.09	44.58	− 6	− 5	20.74	54.78	+ 5	− 8
4	60.93	32.22	+ 3	+11	10.02	36.70	− 6	+ 6	17.27	44.89	− 3	− 8	20.78	55.12	+ 7	− 5
5	61.25	32.31	− 1	+11	10.30	36.91	− 7	+ 2	17.45	45.20	0	− 9	20.82	55.46	+ 7	− 2
6	61.56	32.40	− 4	+ 9	10.57	37.13	− 7	− 3	17.62	45.51	+ 3	− 9	20.85	55.80	+ 6	+ 2
7	61.88	32.49	− 6	+ 5	10.84	37.35	− 5	− 7	17.79	45.82	+ 5	− 7	20.88	56.13	+ 4	+ 5
8	62.20	32.59	− 7	0	11.11	37.58	− 2	− 9	17.96	46.14	+ 7	− 4	20.90	56.47	+ 1	+ 8
9	62.51	32.70	− 6	− 4	11.38	37.81	+ 1	−10	18.12	46.45	+ 7	0	20.92	56.80	− 3	+ 9
10	62.83	32.81	− 4	− 7	11.64	38.04	+ 4	− 9	18.28	46.77	+ 6	+ 3	20.93	57.14	− 7	+ 7
11	63.15	32.92	− 1	− 9	11.90	38.27	+ 6	− 6	18.44	47.09	+ 3	+ 7	20.93	57.47	−11	+ 4
12	63.46	33.03	+ 2	− 9	12.16	38.51	+ 7	− 3	18.59	47.41	− 1	+ 9	20.93	57.80	−12	0
13	63.78	33.15	+ 5	− 8	12.42	38.75	+ 7	+ 1	18.74	47.74	− 5	+ 8	20.92	58.13	−11	− 5
14	64.09	33.28	+ 7	− 5	12.67	39.00	+ 5	+ 5	18.88	48.07	− 8	+ 6	20.91	58.46	− 8	− 9
15	64.40	33.41	+ 7	− 1	12.92	39.25	+ 2	+ 8	19.02	48.39	−11	+ 3	20.90	58.79	− 3	−11
16	64.71	33.54	+ 7	+ 3	13.17	39.50	− 2	+ 9	19.15	48.72	−11	− 2	20.88	59.12	+ 2	−11
17	65.02	33.68	+ 4	+ 6	13.41	39.76	− 6	+ 8	19.28	49.05	−10	− 7	20.85	59.44	+ 7	− 8
18	65.32	33.83	+ 1	+ 9	13.65	40.02	− 9	+ 6	19.40	49.38	− 6	−10	20.82	59.77	+10	− 3
19	65.63	33.98	− 3	+ 9	13.89	40.28	−11	+ 1	19.52	49.71	− 1	−11	20.79	60.09	+11	+ 3
20	65.93	34.13	− 7	+ 8	14.13	40.55	−10	− 4	19.63	50.05	+ 5	−10	20.75	60.41	+10	+ 8
21	66.24	34.28	−10	+ 4	14.37	40.82	− 8	− 8	19.74	50.38	+ 9	− 6	20.70	60.73	+ 7	+11
22	66.54	34.44	−11	0	14.60	41.09	− 3	−10	19.85	50.71	+11	− 1	20.65	61.04	+ 2	+12
23	66.84	34.61	− 9	− 5	14.83	41.37	+ 2	−11	19.95	51.05	+11	+ 5	20.60	61.36	− 2	+11
24	67.14	34.78	− 6	− 9	15.05	41.65	+ 7	− 8	20.05	51.39	+ 9	+ 9	20.54	61.67	− 5	+ 7
25	67.44	34.95	− 1	−11	15.27	41.93	+10	− 4	20.14 20.23	51.73 52.07	+ 5 0	+12 +12	20.47	61.98	− 7	+ 3
26	67.73	35.13	+ 4	−10	15.49	42.21	+11	+ 1	20.31	52.41	− 3	+10	20.40	62.28	− 6	− 2
27	68.02	35.31	+ 8	− 7	15.70	42.50	+10	+ 7	20.39	52.75	− 6	+ 6	20.33	62.58	− 4	− 6
28	68.31	35.50	+10	− 2	15.91	42.79	+ 7	+10	20.46	53.09	− 7	+ 1	20.25	62.88	− 2	− 8
29	68.60	35.69	+10	+ 3	16.12	43.08	+ 2	+12	20.53	53.43	− 6	− 4	20.16	63.18	+ 1	− 9
30	68.89	35.88	+ 8	+ 8	16.32	43.38	− 2	+11	20.59	53.76	− 4	− 7	20.07	63.48	+ 4	− 8
31	69.18	36.08	+ 5	+11	16.52	43.68	− 5	+ 8	20.64	54.10	− 1	− 9	19.98	63.77	+ 7	− 6
32					16.71	43.98	− 7	+ 4					19.88	64.06	+ 8	− 3

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+85° 22′ 30″	12.402	+12.361	+85° 22′ 40″	12.409	+12.369	+85° 23′ 0″	12.424	+12.384
40	12.409	+12.369	50	12.417	+12.376	10	12.432	+12.391

$\alpha_{1933.0} = 4^h\ 14^m\ 46^s.80$ $\delta_{1933.0} = +85°\ 22'\ 35''.35$

Nd) 51 Hev. Cephei $5^m.26$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder		Februar AR.	Februar Dekl.	Februar ☾ Glieder	
	$7^h 10^m$	$+87° 9'$	in 0.01 s	in 0.01 "	$7^h 10^m$	$+87° 9'$	in 0.01 s	in 0.01 "
1	21.26	26.92	+17	+5	22.00	36.89	−9	+5
2	21.42	27.23	+12	+8	21.88	37.19	−12	+1
3	21.57	27.54	+6	+10	21.75	37.48	−13	−3
4	21.72	27.85	0	+9	21.61	37.77	−11	−7
5	21.85	28.16	−6	+7	21.46	38.06	−7	−9
6	21.98	28.47	−10	+4	21.31	38.35	−2	−10
7	22.10	28.78	−12	0	21.14	38.64	+3	−9
8	{22.21 22.31	29.10 29.42	−12 −10	−4} −7}	20.97	38.92	+7	−6
9	22.40	29.73	−6	−9	20.79	39.20	+10	−2
10	22.48	30.05	−1	−9	20.60	39.47	+11	+3
11	22.55	30.36	+5	−8	20.41	39.74	+9	+7
12	22.61	30.68	+9	−4	20.21	40.01	+4	+10
13	22.66	30.99	+11	0	20.00	40.28	−2	+11
14	22.70	31.31	+10	+5	19.78	40.54	−9	+10
15	22.74	31.62	+7	+9	19.55	40.80	−14	+6
16	22.77	31.94	+1	+11	19.32	41.05	−16	+1
17	22.79	32.25	−6	+11	19.08	41.30	−14	−5
18	22.80	32.57	−12	+9	18.83	41.55	−9	−9
19	22.80	32.88	−16	+4	18.58	41.79	−2	−11
20	22.79	33.20	−16	−1	18.32	42.03	+6	−11
21	22.78	33.52	−13	−7	18.05	42.27	+12	−8
22	22.75	33.83	−7	−10	17.77	42.50	+16	−4
23	22.72	34.14	+1	−11	17.49	42.73	+17	+1
24	22.67	34.45	+9	−10	17.20	42.95	+15	+6
25	22.62	34.76	+15	−7	16.91	43.17	+10	+9
26	22.56	35.07	+18	−2	16.61	43.38	+4	+10
27	22.49	35.38	+17	+3	16.30	43.59	−3	+9
28	22.41	35.69	+14	+7	15.99	43.79	−8	+6
29	22.32	35.99	+8	+9	15.68	43.99	−11	+3
30	22.22	36.29	+2	+10				
31	22.11	36.59	−3	+8				
32	22.00	36.89	−9	+5				

Tag	März AR.	März Dekl.	März ☾ Glieder		April AR.	April Dekl.	April ☾ Glieder	
	$7^h 10^m$	$+87° 9'$	in 0.01 s	in 0.01 "	$7^h 9^m$	$+87° 9'$	in 0.01 s	in 0.01 "
1	15.68	43.99	−11	+3	63.99	47.41	−7	−9
2	15.36	44.18	−13	−1	63.58	47.43	−2	−9
3	15.03	44.37	−12	−5	63.17	47.44	+3	−8
4	14.70	44.56	−9	−8	62.76	47.45	+7	−5
5	14.37	44.74	−5	−9	62.36	47.45	+10	−1
6	14.03	44.91	0	−9	61.95	47.44	+10	+4
7	13.68	45.08	+5	−7	61.54	47.43	+7	+8
8	13.33	45.24	+9	−4	61.13	47.41	+2	+11
9	12.97	45.40	+11	+1	60.72	47.38	−4	+11
10	12.61	45.55	+10	+5	60.32	47.35	−10	+9
11	12.25	45.70	+6	+9	59.91	47.31	−14	+5
12	11.88	45.84	0	+11	59.51	47.27	−15	0
13	11.51	45.97	−6	+11	59.11	47.22	−12	−6
14	11.14	46.10	−12	+8	58.71	47.16	−7	−10
15	10.76	46.22	−15	+3	58.32	47.10	+1	−11
16	10.38	46.34	−14	−2	57.92	47.03	+9	−11
17	10.00	46.45	−11	−7	57.53	46.96	+15	−7
18	9.61	46.56	−4	−11	57.14	46.88	+18	−3
19	9.22	46.66	+3	−11	56.75	46.80	+18	+2
20	8.83	46.75	+11	−9	56.37	46.71	+15	+7
21	8.44	46.84	+16	−5	55.99	46.61	+9	+9
22	8.04	46.92	+18	−1	55.61	46.51	+2	+10
23	7.64	47.00	+16	+4	55.23	46.40	−4	+8
24	7.24	47.07	+12	+8	54.85	46.29	−9	+5
25	6.84	47.13	+6	+10	54.48	46.17	−12	+1
26	6.44	47.19	0	+9	54.11	46.05	−13	−3
27	6.04	47.24	−6	+7	53.75	45.92	−11	−6
28	5.63	47.29	−10	+4	53.39	45.79	−8	−8
29	5.22	47.33	−13	0	53.03	45.65	−4	−9
30	4.81	47.36	−13	−4	52.68	45.50	+1	−9
31	4.40	47.39	−10	−7	52.33	45.35	+6	−6
32	3.99	47.41	−7	−9				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+87° 9' 20"	20.151	+20.126	+87° 9' 30"	20.171	+20.146	+87° 9' 40"	20.191	+20.166
30	20.171	+20.146	40	20.191	+20.166	50	20.210	+20.186

$\alpha_{1933.0} = 7^h\ 9^m\ 47^s.41$ $\delta_{1933.0} = +87°\ 9'\ 22''.89$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Nd) 51 Hev. Cephei $5^m.26$

Tag	Mai			Juni			Juli			August		
	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder
	$7^h\ 9^m$	$+87°9'$	in 0.01^s $0.01''$	$7^h\ 9^m$	$+87°9'$	in 0.01^s $0.01''$	$7^h\ 9^m$	$+87°9'$	in 0.01^s $0.01''$	$7^h\ 9^m$	$+87°9'$	in 0.01^s $0.01''$
1	52.33	45.35	+6 −6	44.18	38.51	+5 +9	42.44	29.30	−11 +10	47.55	19.49	−14 −7
2	51.99	45.20	+8 −2	44.02	38.23	−1 +11	42.50	28.98	−16 +6	47.82	19.20	−7 −10
3	51.65	45.04	+9 +2	43.86	37.95	−7 +11	42.56	28.65	−18 +1	48.10	18.90	+1 −11
4	51.32	44.87	+9 +7	43.71	37.67	−13 +9	42.63	28.33	−16 −4	48.39	18.61	+9 −9
5	50.99	44.70	+3 +10	43.57	37.38	−16 +4	42.71	28.00	−11 −8	48.68	18.32	+15 −5
6	50.66	44.53	−3 +11	43.43	37.09	−17 −1	42.80	27.68	−3 −11	48.98	18.03	+17 0
7	50.34	44.35	−9 +10	43.30	36.80	−13 −6	42.90	27.36	+5 −11	49.28	17.74	+16 +4
8	50.03	44.16	−14 +7	43.18	36.50	−7 −10	43.00	27.03	+13 −8	49.59	17.46	+12 +8
9	49.72	43.97	−16 +2	43.07	36.21	+2 −11	*)43.11	26.71	+17 −4	49.91	17.18	+7 +10
10	49.41	43.77	−14 −3	42.96	35.91	+10 −10	43.22	26.38	+18 +1	50.23	16.90	0 +9
11	49.11	43.57	−10 −8	42.86	35.61	+16 −6	43.34	26.06	+16 +6	50.56	16.62	−5 +7
12	48.82	43.37	−2 11	42.77	35.31	+19 −2	43.47	25.74	+11 +9	50.89	16.34	−9 +3
13	48.53	43.16	+6 −11	42.68	35.00	+18 +3	43.61	25.42	+5 +10	51.23	16.07	−11 −1
14	48.24	42.95	+13 −9	42.60	34.70	+15 +7	43.76	25.09	−1 +8	51.58	15.80	−10 −5
15	47.96	42.74	+18 −5	42.53	34.39	+9 +9	43.91	24.77	−7 +5	51.93	15.54	−8 −8
16	47.69	42.52	+19 0	42.47	34.08	+2 +9	44.07	24.45	−10 +2	52.29	15.28	−4 −9
17	47.42	42.30	+17 +5	42.42	33.77	−4 +7	44.24	24.13	−11 −2	52.65	15.02	+1 −9
18	47.16	42.07	+12 +8	42.37	33.45	−9 +4	44.41	23.81	−10 −6	53.01	14.76	+5 −8
19	46.91	41.84	+6 +10	42.33	33.14	−11 0	44.59	23.49	−6 −9	53.38	14.51	+9 −5
20	46.66	41.61	−1 +9	42.30	32.83	−11 −4	44.78	23.18	−2 −10	53.76	14.26	+11 −1
21	46.42	41.37	−7 +6	42.27	32.51	−9 −7	44.97	22.87	+2 −9	54.14	14.01	+10 +4
22	46.18	41.13	−11 +3	42.25	32.19	−5 −9	45.17	22.55	+7 −7	54.53	13.76	+7 +8
23	45.95	40.88	−12 −1	42.24	31.87	−1 −9	45.38	22.24	+10 −3	54.92	13.52	+2 +10
24	45.73	40.63	−11 −5	42.24	31.55	+4 −8	45.59	21.93	+11 +1	55.32	13.28	−4 +11
25	45.51	40.38	−9 −8	42.25	31.23	+7 −5	45.81	21.62	+9 +6	55.72	13.04	−11 +9
26	45.30	40.12	−5 −9	42.26	30.91	+10 −1	46.04	21.31	+5 +9	56.13	12.81	−16 +5
27	45.09	39.86	0 −9	42.28	30.59	+10 +3	46.27	21.00	−1 +11	56.54	12.58	−17 0
28	44.89	39.60	+4 −7	42.31	30.27	+7 +7	46.51	20.69	−8 +11	56.95	12.35	−15 −5
29	44.70	39.33	+8 −4	42.35	29.94	+2 +10	46.76	20.39	−14 +8	57.37	12.13	−9 −9
30	44.52	39.06	+9 0	42.39	29.62	−4 +11	47.02	20.09	−16 +3	57.80	11.91	−2 −11
31	44.35	38.79	+8 +5	42.44	29.30	−11 +10	47.28	19.79	−17 −2	58.23	11.69	+6 −10
32	44.18	38.51	+5 +9				47.55	19.49	−14 −7	58.66	11.48	+12 −7

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+87° 9′ 10″	20.132	+20.107	+87° 9′ 20″	20.151	+20.126	+87° 9′ 40″	20.191	+20.166
20	20.151	+20.126	30	20.171	+20.146	50	20.210	+20.186

$\alpha_{1933.0} = 7^h\ 9^m\ 47^s.41$ $\delta_{1933.0} = +87°\ 9'\ 22''.89$

*) Tag der doppelten unteren Kulmination: Juli 9

Nd) 51 Hev. Cephei $5^m.26$

Tag	September			Oktober			November			Dezember		
	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder
	$7^h 9^m$ s	$+87°9'$ "	in 0.01^s $0.01''$	$7^h 10^m$ s	$+87°9'$ "	in 0.01^s $0.01''$	$7^h 10^m$ s	$+87°9'$ "	in 0.01^s $0.01''$	$7^h 10^m$ s	$+87°9'$ "	in 0.01^s $0.01''$
1	58.66	11.48	+12 − 7	13.18	6.93	+15 + 5	29.43	6.55	− 5 + 7	43.27	10.68	−11 − 3
2	59.09	11.27	+16 − 2	13.70	6.85	+10 + 9	29.94	6.62	−10 + 4	43.66	10.89	− 9 − 7
3	59.53	11.06	+16 + 3	14.22	6.77	+ 4 +10	30.45	6.69	−11 0	44.04	11.10	− 6 − 9
4	59.98	10.86	+14 + 7	14.75	6.69	− 2 + 9	30.96	6.77	−11 − 4	44.42	11.32	− 1 −10
5	60.43	10.66	+ 8 + 9	15.28	6.62	− 7 + 6	31.46	6.85	− 8 − 8	44.79	11.54	+ 3 − 9
6	60.88	10.46	+ 2 +10	15.80	6.55	−11 + 2	31.96	6.94	− 4 − 9	45.16	11.76	+ 7 − 6
7	61.34	10.27	− 4 + 8	16.33	6.49	−12 − 2	32.45	7.03	0 − 9	45.52	11.99	+ 9 − 2
8	61.80	10.08	− 8 + 5	16.85	6.43	−10 − 6	32.94	7.13	+ 4 − 8	45.87	12.22	+10 + 2
9	62.26	9.90	−11 + 1	17.38	6.38	− 7 − 8	33.43	7.23	+ 8 − 5	46.21	12.46	+ 8 + 6
10	62.73	9.72	−11 − 3	17.91	6.33	− 3 − 9	33.92	7.34	+10 − 1	46.55	12.70	+ 3 + 9
11	63.20	9.55	− 9 − 7	18.44	6.29	+ 2 − 9	34.41	7.45	+ 9 + 3	46.88	12.94	− 2 +11
12	63.67	9.38	− 5 − 9	18.96	6.26	+ 6 − 7	34.89	7.57	+ 6 + 8	47.21	13.19	− 9 +11
13	64.15	9.21	− 1 − 9	19.49	6.23	+ 9 − 3	35.37	7.69	+ 2 +10	47.53	13.44	−15 + 8
14	64.63	9.05	+ 4 − 8	20.02	6.20	+10 + 1	35.85	7.82	− 4 +11	47.84	13.70	−18 + 3
15	65.11	8.89	+ 8 − 6	20.55	6.18	+ 9 + 5	36.32	7.95	−10 +10	48.14	13.96	−17 − 2
16	65.60	8.73	+10 − 2	21.08	6.16	+ 5 + 9	36.79	8.09	−15 + 6	48.44	14.22	−13 − 6
17	66.09	8.58	+11 + 2	21.60	6.15	0 +11	37.25	8.23	−17 + 1	48.73	14.48	− 7 −10
18	66.58	8.44	+ 9 + 7	22.13	6.14	− 6 +11	37.71	8.38	−15 − 4	49.01	14.75	+ 2 −11
19	67.07	8.30	+ 4 +10	22.66	6.14	−12 + 8	38.17	8.53	−10 − 9	49.28	15.02	+10 − 9
20	67.57	8.16	− 2 +11	23.19	6.14	−15 + 4	38.62	8.68	− 3 −11	49.55	15.29	+16 − 5
21	68.07	8.02	− 8 +10	23.71	6.15	−16 − 1	39.07	8.84	+ 6 −11	49.81	15.57	+18 − 1
22	68.57	7.89	−13 + 7	24.24	6.16	−13 − 6	39.51	9.00	+13 − 8	50.06	15.85	+17 + 4
23	69.07	7.77	−16 + 2	24.76	6.18	− 7 −10	39.95	9.17	+17 − 4	50.31	16.13	+13 + 8
24	69.58	7.65	−15 − 3	25.29	6.20	+ 1 −11	40.39	9.34	+18 + 1	50.55	16.41	+ 7 +10
25	70.09	7.53	−11 − 8	25.82	6.23	+ 9 −10	40.82	9.52	+16 + 6	50.78	16.70	0 + 9
26	70.60	7.42	− 4 −10	26.34	6.26	+15 − 6	41.24	9.70	+10 + 9	51.00	16.99	− 5 + 6
27	71.11	7.32	+ 3 −11	26.86	6.29	+18 − 1	41.66	9.89	+ 4 +10	51.21	17.28	− 9 + 2
28	71.62	7.22	+11 − 9	27.38	6.33	+17 + 3	42.07	10.08	− 2 + 8	51.41	17.57	−10 − 2
29	72.14	7.12	+16 − 4	27.89	6.38	+13 + 8	42.47	10.28	− 8 + 5	51.60	17.87	− 9 − 6
30	72.66	7.02	+17 + 1	28.41	6.43	+ 7 +10	42.87	10.48	−11 + 1	51.79	18.16	− 6 − 8
31	73.18	6.93	+15 + 5	28.92	6.49	+ 1 +10	43.27	10.68	−11 − 3	51.97	18.46	− 2 −10
32				29.43	6.55	− 5 + 7				52.14	18.76	+ 2 − 9

δ	sec δ	tg δ	δ	sec δ	tg δ
+87° 9′ 0″	20.112	+20.087	+87° 9′ 10″	20.132	+20.107
10	20.132	+20.107	20	20.151	+20.126

$\alpha_{1933.0} = 7^h\ 9^m\ 47^s.41$ $\delta_{1933.0} = +87°\ 9'\ 22''.89$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Ne) 1 Hev. Draconis $4^{m}.58$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder		Februar AR.	Februar Dekl.	Februar ☾ Glieder		März AR.	März Dekl.	März ☾ Glieder		April AR.	April Dekl.	April ☾ Glieder	
		+	in			+	in			+	in			+	in	
	$9^h 27^m$	81° 37′	0.01 s	0.01 ″	$9^h 27^m$	81° 37′	0.01 s	0.01 ″	$9^h 27^m$	81° 37′	0.01 s	0.01 ″	$9^h 27^m$	81° 37′	0.01 s	0.01 ″
	s	″			s	″			s	″			s	″		
1	52.09	19.02	+7	−2	55.11	26.28	0	+8	55.42	34.84	−3	+6	53.18	42.53	−4	−5
2	52.23	19.19	+6	+2	55.16	26.56	−2	+7	55.38	35.13	−5	+3	53.07	42.72	−3	−7
3	52.36	19.37	+4	+6	55.21	26.85	−4	+5	55.34	35.41	−5	0	52.97	42.91	0	−7
4	52.49	19.55	+2	+8	55.26	27.14	−5	+2	55.30	35.70	−5	−3	52.86	43.09	+2	−7
5	52.62	19.74	−1	+8	55.31	27.42	−5	−1	55.26	35.98	−4	−6	52.75	43.26	+3	−4
6	52.74	19.93	−3	+7	55.35	27.71	−4	−4	55.22	36.26	−2	−8	52.64	43.43	+4	0
7	52.87	20.13	−4	+4	55.39	28.01	−3	−7	55.17	36.54	0	−8	52.52	43.60	+4	+4
8	52.99	20.33	−5	+1	55.42	28.31	−1	−8	55.12	36.82	+3	−6	52.40	43.76	+3	+8
9	53.11	20.54	−5	−3	55.45	28.60	+1	−7	55.07	37.10	+4	−3	52.29	43.91	+1	+11
10	53.23	20.75	−4	−6	55.48	28.90	+3	−5	55.01	37.37	+5	+1	52.17	44.06	−1	+11
11	53.34	20.96	−2	−8	55.51	29.19	+5	−1	54.95	37.64	+4	+5	52.05	44.20	−4	+9
12	53.45	21.18	0	−8	55.53 55.55	29.49 29.79	+5 +4	+3 +7	54.89	37.91	+2	+9	51.93	44.34	−5	+5
13	53.56	21.40	+2	−7	55.57	30.09	+1	+10	54.83	38.18	0	+11	51.81	44.48	−6	0
14	53.67	21.63	+4	−4	55.58	30.38	−1	+11	54.76	38.44	−3	+11	51.69	44.61	−4	−6
15	53.77	21.86	+5	0	55.59	30.68	−4	+10	54.69	38.70	−5	+8	51.57	44.73	−2	−10
16	53.87	22.09	+4	+5	55.60	30.98	−5	+6	54.62	38.95	−6	+3	51.44	44.85	+1	−12
17	53.97	22.33	+3	+9	55.60	31.29	−6	+1	54.55	39.20	−5	−2	51.32	44.96	+4	−12
18	54.06	22.57	0	+11	55.60	31.59	−5	−4	54.47	39.45	−4	−7	51.19	45.07	+6	−9
19	54.15	22.82	−2	+11	55.60	31.89	−3	−9	54.39	39.70	−1	−11	51.06	45.17	+7	−5
20	54.24	23.07	−5	+9	55.59	32.19	0	−11	54.31	39.94	+2	−12	50.94	45.27	+6	0
21	54.33	23.32	−6	+5	55.58	32.48	+3	−10	54.22	40.18	+4	−10	50.81	45.36	+5	+4
22	54.42	23.57	−6	−1	55.57	32.78	+5	−9	54.14	40.42	+6	−7	50.68	45.44	+3	+7
23	54.50	23.83	−4	−6	55.56	33.08	+6	−5	54.05	40.65	+7	−2	50.56	45.52	0	+8
24	54.58	24.09	−2	−10	55.54	33.37	+6	−1	53.96	40.88	+6	+2	50.42	45.59	−2	+8
25	54.66	24.35	+1	−12	55.52	33.67	+5	+4	53.87	41.10	+4	+6	50.29	45.66	−4	+5
26	54.73	24.62	+4	−11	55.50	33.96	+3	+7	53.78	41.32	+2	+8	50.16	45.72	−5	+2
27	54.80	24.89	+6	−8	55.48	34.26	+1	+8	53.68	41.53	−1	+8	50.03	45.78	−5	−1
28	54.87	25.16	+7	−4	55.45	34.55	−2	+8	53.58	41.74	−3	+7	49.90	45.83	−5	−4
29	54.94	25.43	+6	+1	55.42	34.84	−3	+6	53.48	41.95	−5	+4	49.77	45.88	−3	−6
30	55.00	25.71	+5	+5					53.38	42.15	−5	+1	49.63	45.92	−1	−7
31	55.06	26.00	+2	+7					53.28	42.34	−5	−2	49.50	45.95	+1	−7
32	55.11	26.28	0	+8					53.18	42.53	−4	−5				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+81° 37′ 10″	6.861	+6.788	+81° 37′ 30″	6.866	+6.792	+81° 37′ 40″	6.868	+6.795
20	6.863	+6.790	40	6.868	+6.795	50	6.870	+6.797

$\alpha_{1933.0} = 9^h\ 27^m\ 41^s.28$ $\delta_{1933.0} = +81^\circ\ 37'\ 29''.76$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Ne) 1 Hev. Draconis $4^m.58$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder		Juni AR.	Juni Dekl.	Juni ☾ Glieder		Juli AR.	Juli Dekl.	Juli ☾ Glieder		August AR.	August Dekl.	August ☾ Glieder	
	$9^h 27^m$	$+81° 37'$	in 0.01^s	in $0.01''$	$9^h 27^m$	$+81° 37'$	in 0.01^s	in $0.01''$	$9^h 27^m$	$+81° 37'$	in 0.01^s	in $0.01''$	$9^h 27^m$	$+81° 37'$	in 0.01^s	in $0.01''$
	s	"			s	"			s	"			s	"		
1	49.50	45.95	+1	−7	45.63	44.21	+4	+6	42.95	37.95	−2	+12	42.03	28.32	−6	−1
2	49.37	45.98	+3	−5	45.51	44.07	+2	+10	42.89	37.68	−4	+11	42.03	27.98	−4	−6
3	49.24	46.00	+4	−1	45.40	43.92	0	+12	42.83	37.41	−6	+7	42.04	27.64	−2	−9
4	49.11	46.02	+4	+3	45.29	43.77	−3	+12	42.77	37.13	−6	+2	42.05	27.30	+1	−11
5	48.98	46.03	+3	+7	45.18	43.61	−5	+9	42.71	36.85	−5	−3	42.06	26.95	+4	−10
6	48.85	46.03	+1	+10	45.08	43.45	−6	+5	42.66	36.56	−3	−8	42.07	26.60	+6	−7
7	48.72	46.03	−1	+12	44.97	43.28	−6	0	42.61	36.27	0	−11	42.09	26.25	+7	−2
8	48.59	46.03	−3	+11	44.87	43.11	−4	−6	42.56	35.98	+3	−11	42.12	25.91	+6	+2
9	48.46	46.02	−5	+7	44.77	42.93	−2	−10	42.51	35.69	+5	−9	42.14	25.56	+4	+5
10	48.33	46.00	−6	+2	44.67	42.75	+1	−12	42.47	35.40	+7	−6	42.16	25.21	+2	+7
11	48.20	45.98	−5	−3	44.58	42.56	+4	−11	42.43	35.10	+7	−1	42.19	24.86	−1	+8
12	48.07	45.95	−3	−8	44.48	42.37	+6	−8	42.39	34.80	+6	+3	42.22	24.51	−3	+6
13	47.94	45.92	0	−11	44.38	42.17	+7	−4	42.35	34.50	+4	+6	*)42.24	24.16	−4	+3
14	47.81	45.88	+3	−12	44.29	41.97	+7	0	42.31	34.19	+1	+7	42.27	23.81	−5	0
15	47.69	45.83	+5	−10	44.19	41.77	+5	+4	42.27	33.88	−1	+7	42.31	23.46	−4	−4
16	47.56	45.78	+7	−7	44.10	41.56	+3	+7	42.24	33.57	−3	+5	42.35	23.11	−3	−6
17	47.43	45.72	+7	−2	44.01	41.35	0	+7	42.21	33.26	−4	+2	42.39	22.76	−2	−8
18	47.30	45.66	+6	+2	43.92	41.13	−2	+6	42.18	32.94	−5	−2	42.43	22.40	0	−8
19	47.18	45.59	+4	+6	43.83	40.91	−4	+4	42.16	32.62	−4	−5	42.47	22.05	+2	−7
20	47.05	45.51	+1	+8	43.75	40.69	−5	+1	42.14	32.30	−3	−7	42.52	21.70	+4	−4
21	46.92	45.43	−1	+8	43.67	40.46	−5	−3	42.12	31.98	−1	−8	42.57	21.34	+4	0
22	46.80	45.35	−3	+6	43.59	40.23	−4	−5	42.10	31.65	+1	−8	42.62	20.99	+4	+4
23	46.68	45.26	−5	+3	43.51	39.99	−2	−7	42.08	31.33	+3	−6	42.67	20.64	+3	+8
24	46.56	45.16	−5	0	43.43	39.75	0	−8	42.06	31.00	+4	−3	42.72	20.29	+1	+11
25	46.44	45.06	−5	−3	43.35	39.50	+2	−7	42.05	30.67	+4	+1	42.78	19.94	−2	+11
26	46.32	44.96	−4	−6	43.28	39.25	+3	−5	42.04	30.34	+4	+6	42.84	19.59	−4	+10
27	46.20	44.85	−2	−7	43.21	39.00	+4	−1	42.03	30.01	+2	+10	42.90	19.24	−6	+6
28	46.08	44.73	0	−7	43.14	38.74	+4	+3	42.03	29.67	0	+12	42.96	18.89	−6	+1
29	45.97	44.61	+2	−6	43.07	38.48	+3	+8	42.03	29.33	−3	+12	43.03	18.54	−5	−4
30	45.85	44.48	+4	−3	43.01	38.22	+1	+11	42.03	29.00	−5	+9	43.10	18.19	−3	−8
31	45.74	44.35	+4	+1	42.95	37.95	−2	+12	42.03	28.66	−6	+5	43.17	17.84	0	−10
32	45.63	44.21	+4	+6					42.03	28.32	−6	−1	43.24	17.50	+3	−10

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+81° 37′ 10″	6.861	+6.788	+81° 37′ 30″	6.866	+6.792	+81° 37′ 40″	6.868	+6.795
20	6.863	+6.790	40	6.868	+6.795	50	6.870	+6.797

$\alpha_{1933.0} = 9^h\ 27^m\ 41^s.28$ $\delta_{1933.0} = +81°\ 37'\ 29''.76$

*) Tag der doppelten unteren Kulmination: Aug. 13

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Ne) 1 Hev. Draconis $4^m.58$

Tag	September				Oktober				November				Dezember			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	$9^h 27^m$	$+81° 37'$	in $0^s.01$	in $0''.01$	$9^h 27^m$	$+81° 37'$	in $0^s.01$	in $0''.01$	$9^h 27^m$	$+81° 36'$	in $0^s.01$	in $0''.01$	$9^h 27^m$	$+81° 36'$	in $0^s.01$	in $0''.01$
	s	"			s	"			s	"			s	"		
1	43.24	17.50	+3	−10	46.28	7.86	+6	− 1	50.94	60.70	0	+ 8	56.15	58.09	−5	+ 1
2	43.31	17.16	+5	− 8	46.40	7.57	+5	+ 3	51.11	60.54	−3	+ 6	56.33	58.09	−5	− 2
3	43.38	16.81	+6	− 4	46.53	7.29	+3	+ 7	51.28	60.38	−4	+ 4	56.50	58.10	−4	− 5
4	43.46	16.47	+6	+ 1	46.67	7.01	+1	+ 8	51.45	60.23	−5	0	56.68	58.11	−2	− 7
5	43.54	16.12	+5	+ 5	46.80	6.73	−1	+ 8	51.62	60.08	−5	− 3	56.85	58.12	−1	− 8
6	43.62	15.78	+3	+ 7	46.94	6.46	−3	+ 6	51.79	59.94	−3	− 6	57.02	58.14	+1	− 7
7	43.70	15.44	0	+ 8	47.07	6.19	−5	+ 2	51.96	59.80	−2	− 8	57.19	58.17	+3	− 5
8	43.79	15.10	−2	+ 7	47.21	5.92	−5	− 1	52.14	59.67	0	− 8	57.36	58.21	+4	− 2
9	43.88	14.77	−4	+ 4	47.35	5.66	−4	− 4	52.31	59.54	+2	− 7	57.53	58.25	+4	+ 2
10	43.97	14.43	−5	+ 1	47.49	5.40	−3	− 7	52.48	59.42	+3	− 4	57.69	58.29	+3	+ 7
11	44.06	14.10	−5	− 2	47.64	5.14	−2	− 8	52.66	59.30	+4	0	57.86	58.34	+1	+10
12	44.15	13.77	−4	− 5	47.78	4.89	+1	− 8	52.83	59.19	+4	+ 4	58.03	58.40	−1	+12
13	44.24	13.44	−2	− 7	47.93	4.64	+2	− 6	53.00	59.08	+3	+ 8	58.19	58.46	−3	+12
14	44.34	13.11	0	− 8	48.08	4.40	+4	− 3	53.17	58.98	+1	+11	58.36	58.53	−5	+ 9
15	44.44	12.78	+1	− 8	48.23	4.16	+4	+ 1	53.35	58.89	−2	+12	58.52	58.60	−6	+ 5
16	44.54	12.46	+3	− 5	48.38	3.92	+4	+ 5	53.52	58.80	−4	+10	58.68	58.68	−6	− 1
17	44.64	12.14	+4	− 2	48.53	3.69	+2	+ 9	53.70	58.71	−6	+ 7	58.84	58.77	−4	− 6
18	44.75	11.82	+4	+ 2	48.69	3.46	0	+11	53.88	58.63	−6	+ 2	58.99	58.86	−2	−10
19	44.86	11.50	+3	+ 6	48.84	3.24	−2	+11	54.05	58.56	−5	− 3	59.15	58.96	+2	−11
20	44.97	11.18	+2	+10	49.00	3.02	−5	+ 9	54.23	58.49	−3	− 8	59.31	59.06	+4	−10
21	45.08	10.87	−1	+11	49.15	2.80	−6	+ 5	54.41	58.42	0	−11	59.46	59.17	+6	− 7
22	45.19	10.56	−3	+11	49.31	2.59	−6	− 1	54.58	58.36	+3	−11	59.62	59.28	+7	− 3
23	45.30	10.25	−5	+ 7	49.47	2.38	−4	− 6	54.76	58.31	+5	− 9	59.77	59.40	+6	+ 2
24	45.42	9.94	−6	+ 3	49.63	2.18	−2	−10	54.94	58.26	+7	− 6	59.92	59.52	+4	+ 5
25	45.53	9.64	−5	− 3	49.79	1.98	+1	−11	55.11	58.22	+7	− 1	60.07	59.65	+2	+ 7
26	45.65	9.34	−4	− 7	49.95	1.78	+4	−11	55.29	58.18	+6	+ 3	60.22	59.79	−1	+ 7
27	45.78	9.04	−1	−10	50.11	1.59	+6	− 7	55.46	58.15	+3	+ 7	60.36	59.93	−3	+ 5
28	45.90	8.74	+2	−11	50.28	1.41	+7	− 3	55.63	58.13	+1	+ 8	60.50	60.07	−4	+ 2
29	46.02	8.44	+5	− 9	50.44	1.23	+6	+ 2	55.81	58.11	−2	+ 7	60.64	60.22	−4	− 1
30	46.15	8.15	+6	− 6	50.61	1.05	+4	+ 5	55.98	58.10	−4	+ 5	60.78	60.38	−4	− 5
31	46.28	7.86	+6	− 1	50.77	0.87	+2	+ 8	56.15	58.09	−5	+ 1	60.92	60.54	−3	− 7
32					50.94	0.70	0	+ 8					61.06	60.70	−1	− 8

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+81° 36′ 50″	6.857	+6.783	+81° 37′ 0″	6.859	+6.786	+81° 37′ 10″	6.861	+6.788
60	6.859	+6.786	10	6.861	+6.788	20	6.863	+6.790

$\alpha_{1933.0} = 9^h\ 27^m\ 41^s.28$ $\delta_{1933.0} = +81°\ 37'\ 29''.76$

Nf) 30 Hev. Camelopardalis $5^{m}.34$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder in 0.01 s	Januar ☾ Glieder in 0.01 ″	Februar AR.	Februar Dekl.	Februar ☾ Glieder in 0.01 s	Februar ☾ Glieder in 0.01 ″	März AR.	März Dekl.	März ☾ Glieder in 0.01 s	März ☾ Glieder in 0.01 ″	April AR.	April Dekl.	April ☾ Glieder in 0.01 s	April ☾ Glieder in 0.01 ″
	$10^{h}23^{m}$ s	$+82^{\circ}53'$ ″			$10^{h}23^{m}$ s	$+82^{\circ}53'$ ″			$10^{h}23^{m}$ s	$+82^{\circ}54'$ ″			$10^{h}23^{m}$ s	$+82^{\circ}54'$ ″		
1	15.65	47.44	+7	−5	20.08	53.20	+1	+7	21.55	1.56	−3	+7	19.97	10.33	−5	−3
2	15.83	47.55	+7	0	20.18	53.46	−2	+8	21.55	1.86	−5	+5	19.87	10.57	−4	−5
3	16.00	47.67	+5	+3	20.28	53.72	−4	+6	21.54	2.16	−6	+2	19.77	10.81	−2	−7
4	16.18	47.79	+3	+6	20.37	53.98	−5	+4	21.53	2.47	−6	−1	19.67	11.04	+1	−7
5	16.35	47.91	0	+8	20.46	54.25	−6	+1	21.52	2.77	−5	−4	19.56	11.27	+3	−5
6	16.52	48.04	−2	+7	20.54	54.52	−5	−2	21.50	3.07	−3	−6	19.45	11.50	+5	−2
7	16.68	48.18	−5	+6	20.62	54.79	−4	−5	21.48	3.38	0	−7	19.34	11.72	+5	+2
8	16.85	48.32	−6	+3	20.70	55.06	−2	−7	21.46	3.68	+2	−7	19.23	11.94	+4	+6
9	17.01	48.47	−6	0	20.77	55.34	+1	−7	21.44	3.98	+4	−4	19.11	12.15	+3	+10
10	17.17	48.62	−5	−3	20.84	55.63	+3	−6	21.41	4.28	+5	−1	18.99	12.36	0	+11
11	17.33	48.78	−3	−6	20.91	55.91	+5	−3	21.38	4.58	+5	+3	18.87	12.56	−3	+10
12	17.49	48.94	−1	−7	20.98	56.19	+6	+1	21.34	4.87	+4	+7	18.75	12.76	−5	+7
13	17.65	49.11	+2	−7	21.04	56.48	+5	+5	21.30	5.17	+2	+10	18.63	12.96	−6	+2
14	17.80	49.28	+4	−5	21.10	56.77	+3	+9	21.26	5.46	−1	+10	18.51	13.15	−6	−4
15	17.95	49.46	+5	−2	21.15	57.05	0	+11	21.21	5.75	−4	+9	18.38	13.34	−4	−8
16	18.10	49.65	+5	+3	21.20	57.34	−3	+11	21.16	6.04	−6	+5	18.25	13.52	−1	−11
17	18.24	49.84	+4	+7	21.25	57.64	−5	+8	21.11	6.33	−6	0	18.12	13.70	+3	−12
18	18.38	50.03	+2	+10	21.29	57.94	−6	+3	21.05	6.61	−5	−5	17.99	13.87	+5	−11
19	18.52	50.23	−1	+11	21.33	58.23	−6	−2	20.99	6.90	−3	−9	17.85	14.04	+7	−7
20	18.66	50.43	−4	+10	21.37	58.53	−5	−7	20.93	7.18	0	−12	17.71	14.20	+7	−2
21	18.79	50.64	−6	+7	21.40	58.83	−2	−10	20.86	7.46	+4	−11	17.58	14.36	+6	+2
22	18.92	50.85	−7	+2	21.43	59.13	+2	−11	20.79	7.73	+6	−9	17.44	14.51	+4	+5
23	19.05	51.07	−6	−4	21.46	59.43	+4	−10	20.72	8.00	+7	−5	17.30	14.66	+1	+7
24	19.18	51.29	−4	−8	21.48	59.73	+6	−7	20.65	8.27	+7	0	17.16	14.80	−1	+8
25	19.30	51.51	0	−11	21.50	60.03	+7	−3	20.58	8.54	+5	+4	17.02	14.93	−4	+6
26	19.42	51.74	+3	−11	21.52 21.53	60.34 60.64	+6 +5	+1 +5	20.50	8.81	+3	+7	16.88	15.06	−5	+4
27	19.54	51.97	+6	−10	21.54	60.95	+2	+7	20.42	9.07	0	+8	16.73	15.19	−6	+1
28	19.65	52.21	+7	−6	21.55	61.25	−1	+8	20.33	9.33	−2	+8	16.58	15.31	−6	−2
29	19.76	52.45	+7	−2	21.55	61.56	−3	+7	20.24	9.59	−5	+6	16.44	15.43	−4	−5
30	19.87	52.70	+6	+2					20.15	9.84	−6	+3	16.29	15.54	−2	−6
31	19.98	52.95	+4	+5					20.06	10.09	−6	0	16.14	15.64	0	−7
32	20.08	53.20	+1	+7					19.97	10.33	−5	−3				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
$+82^{\circ}\ 53'\ 40''$	8.084	+8.022	$+82^{\circ}\ 53'\ 50''$	8.087	+8.025	$+82^{\circ}\ 54'\ 10''$	8.094	+8.032
50	8.087	+8.025	60	8.091	+8.028	20	8.097	+8.035

$\alpha_{1933.0} = 10^{h}\ 23^{m}\ 4^{s}.70$ $\delta_{1933.0} = +82^{\circ}\ 54'\ 3''.34$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Nf) 30 Hev. Camelopardalis $5^m.34$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder	Juni AR.	Juni Dekl.	Juni ☾ Glieder	Juli AR.	Juli Dekl.	Juli ☾ Glieder	August AR.	August Dekl.	August ☾ Glieder
	10^h23^m	+82° 54′	in 0.01s | 0.01″	10^h23^m	+82° 54′	in 0.01s | 0.01″	10^h23^m	+82° 54′	in 0.01s | 0.01″	10^h23^m	+82° 53′	in 0.01s | 0.01″
	s	″		s	″		s	″		s	″	
1	16.14	15.64	0 − 7	11.36	16.07	+5 + 4	7.36	11.46	0 +12	4.94	62.67	−7 + 2
2	15.99	15.74	+2 − 6	11.21	15.99	+4 + 8	7.25	11.23	−3 +12	4.90	62.34	−6 − 4
3	15.84	15.84	+4 − 3	11.06	15.91	+2 +11	7.14	11.00	−6 + 9	4.86	62.00	−3 − 8
4	15.69	15.93	+5 + 1	10.91	15.82	−2 +12	7.04	10.77	−7 + 4	4.82	61.66	0 −10
5	15.54	16.01	+5 + 5	10.77	15.72	−4 +11	6.93	10.53	−7 − 1	4.79	61.32	+3 −11
6	15.38	16.08	+3 + 9	10.62	15.62	−6 + 7	6.83	10.28	−5 − 6	4.76	60.98	+6 − 9
7	15.23	16.15	+1 +11	10.47	15.51	−7 + 2	6.73	10.03	−2 −10	4.73	60.64	+7 − 5
8	15.08	16.22	−2 +11	10.33	15.40	−6 − 4	6.63	9.78	+2 −12	4.70	60.29	+7 − 1
9	14.92	16.28	−5 + 9	10.19	15.29	−3 − 9	6.54	9.52	+5 −11	4.67	59.94	+5 + 3
10	14.77	16.33	−6 + 4	10.04	15.17	0 −12	6.44	9.26	+7 − 8	4.65	59.59	+3 + 6
11	14.61	16.38	−6 − 1	9.90	15.04	+3 −12	6.35	8.99	+7 − 4	4.63	59.24	0 + 7
12	14.46	16.42	−5 − 6	9.76	14.91	+6 −10	6.26	8.72	+7 0	4.61	58.89	−2 + 6
13	14.30	16.46	−2 −11	9.62	14.77	+8 − 7	6.17	8.45	+5 + 4	4.60	58.54	−4 + 5
14	14.15	16.49	+1 −12	9.48	14.63	+7 − 2	6.09	8.17	+2 + 6	4.59	58.18	−5 + 2
15	13.99	16.52	+4 −12	9.35	14.48	+6 + 2	6.00	7.89	−1 + 7	4.58	57.82	−5 − 2
16	13.84	16.54	+7 − 9	9.21	14.33	+4 + 5	5.92	7.61	−3 + 6	4.57	57.46	−5 − 4
17	13.68	16.55	+7 − 5	9.07	14.17	+1 + 7	5.84	7.32	−5 + 4	4.57	57.10	−3 − 7
18	13.52	16.56	+7 0	8.94	14.01	−2 + 7	5.77	7.03	−5 + 1	4.57	56.74	−1 − 8
19	13.37	16.56	+5 + 4	8.81	13.85	−4 + 5	5.70	6.74	−5 − 2	4.57	56.38	+2 − 7
20	13.21	16.56	+3 + 6	8.68	13.68	−5 + 3	5.63	6.44	−4 − 5	4.57	56.01	+4 − 5
21	13.05	16.55	0 + 8	8.55	13.50	−6 0	5.56	6.14	−2 − 7	4.58	55.65	+5 − 2
22	12.90	16.53	−3 + 7	8.42	13.32	−5 − 3	5.49	5.84	0 − 8	4.59	55.29	+5 + 2
23	12.74	16.51	−5 + 5	8.30	13.13	−4 − 6	5.42	5.54	+3 − 7	4.60	54.92	+4 + 6
24	12.58	16.48	−6 + 2	8.18	12.94	−2 − 7	5.36	5.23	+4 − 4	4.61	54.55	+2 + 9
25	12.43	16.45	−6 − 1	8.06	12.74	+1 − 7	5.30	4.92	+5 0	4.63	54.18	0 +11
26	12.27	16.41	−5 − 4	7.94	12.54	+3 − 6	5.24	4.61	+5 + 4	4.65	53.81	−3 +11
27	12.12	16.37	−3 − 6	7.82	12.33	+4 − 2	5.18	4.29	+3 + 8	4.67	53.44	−6 + 8
28	11.97	16.32	−1 − 7	7.70	12.12	+5 + 2	5.13	3.97	+1 +11	*)4.69	53.07	−7 + 3
29	11.81	16.27	+2 − 6	7.59	11.91	+4 + 6	5.08	3.65	−2 +12	4.72	52.70	−6 − 2
30	11.66	16.21	+4 − 4	7.47	11.69	+2 +10	5.03	3.33	−5 +10	4.75	52.33	−4 − 7
31	11.51	16.14	+5 0	7.36	11.46	0 +12	4.98	3.00	−6 + 7	4.78	51.96	−1 −10
32	11.36	16.07	+5 + 4				4.94	2.67	−7 + 2	4.82	51.59	+2 −11

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+82° 53′ 50″	8.087	+8.025	+82° 54′ 0″	8.091	+8.028	+82° 54′ 10″	8.094	+8.032
60	8.091	+8.028	10	8.094	+8.032	20	8.097	+8.035

$\alpha_{1933.0} = 10^h\ 23^m\ 4^s.70$ $\delta_{1933.0} = +82°\ 54'\ 3''.34$

*) Tag der doppelten unteren Kulmination: Aug. 28

Nf) 30 Hev. Camelopardalis $5^m.34$

Tag	September			Oktober			November			Dezember		
	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder
	10^h23^m	+82° 53′	in $0.^s01$ $0.''01$	10^h23^m	+82° 53′	in $0.^s01$ $0.''01$	10^h23^m	+82° 53′	in $0.^s01$ $0.''01$	10^h23^m	+82° 53′	in $0.^s01$ $0.''01$
1	4.82	51.59	+2 −11	7.03	40.73	+7 − 4	11.42	31.49	+1 + 8	17.08	26.47	−5 + 3
2	4.86	51.22	+5 − 9	7.13	40.38	+7 + 1	11.59	31.25	−2 + 7	17.28	26.39	−5 0
3	4.90	50.85	+7 − 6	7.24	40.04	+5 + 5	11.77	31.02	−4 + 5	17.48	26.31	−5 − 3
4	4.94	50.48	+7 − 2	7.36	39.71	+2 + 7	11.95	30.79	−5 + 2	17.68	26.24	−4 − 6
5	4.98	50.11	+6 + 2	7.48	39.38	−1 + 8	12.12	30.56	−5 − 1	17.88	26.18	−2 − 7
6	5.03	49.74	+4 + 5	7.60	39.05	−3 + 6	12.30	30.34	−5 − 4	18.08	26.12	0 − 7
7	5.08	49.37	+1 + 7	7.72	38.72	−5 + 4	12.48	30.12	−3 − 6	18.28	26.07	+2 − 6
8	5.13	49.00	−1 + 7	7.84	38.39	−6 + 1	12.66	29.91	−1 − 7	18.48	26.02	+4 − 3
9	5.19	48.63	−4 + 6	7.97	38.06	−5 − 2	12.84	29.70	+1 − 7	18.68	25.98	+5 + 1
10	5.24	48.26	−5 + 3	8.10	37.74	−4 − 5	13.03	29.50	+3 − 5	18.88	25.95	+4 + 5
11	5.30	47.89	−6 0	8.23	37.42	−2 − 7	13.21	29.30	+4 − 2	19.07	25.92	+3 + 9
12	5.36	47.52	−5 − 3	8.36	37.10	0 − 7	13.39	29.11	+5 + 2	19.27	25.90	+1 +11
13	5.43	47.15	−4 − 6	8.49	36.79	+2 − 6	13.58	28.92	+4 + 6	19.47	25.88	−2 +12
14	5.50	46.78	−1 − 7	8.63	36.48	+4 − 4	13.76	28.74	+2 +10	19.66	25.87	−5 +11
15	5.57	46.41	+1 − 7	8.77	36.17	+5 − 1	13.95	28.56	0 +12	19.86	25.87	−7 + 7
16	5.64	46.05	+3 − 6	8.91	35.87	+5 + 3	14.14	28.39	−3 +11	20.05	25.88	−7 + 2
17	5.71	45.68	+5 − 3	9.05	35.57	+4 + 7	14.33	28.23	−5 + 9	20.25	25.89	−6 − 4
18	5.79	45.32	+5 0	9.20	35.27	+2 +10	14.53	28.07	−7 + 4	20.44	25.90	−3 − 8
19	5.87	44.96	+5 + 5	9.35	34.98	−1 +11	14.72	27.91	−6 − 1	20.63	25.92	0 −11
20	5.95	44.59	+3 + 8	9.50	34.69	−4 +10	14.91	27.76	−5 − 6	20.82	25.95	+4 −11
21	6.04	44.23	+1 +11	9.65	34.40	−6 + 7	15.11	27.62	−2 −10	21.02	25.98	+6 − 9
22	6.13	43.87	−2 +11	9.80	34.12	−6 + 2	15.30	27.48	+2 −12	21.21	26.02	+7 − 5
23	6.22	43.51	−5 + 9	9.95	33.84	−6 − 4	15.50	27.34	+5 −11	21.40	26.07	+7 − 1
24	6.31	43.16	−6 + 5	10.11	33.56	−3 − 8	15.70	27.21	+7 − 8	21.59	26.12	+6 + 3
25	6.40	42.80	−6 0	10.27	33.29	0 −11	15.89	27.09	+7 − 3	21.77	26.18	+3 + 6
26	6.50	42.45	−5 − 5	10.43	33.02	+3 −11	16.09	26.97	+7 + 1	21.96	26.25	0 + 7
27	6.61	42.11	−2 − 9	10.59	32.75	+6 − 9	16.29	26.86	+5 + 5	22.15	26.32	−2 + 6
28	6.71	41.76	+1 −11	10.75	32.49	+7 − 6	16.49	26.75	+2 + 7	22.33	26.39	−4 + 4
29	6.81	41.41	+4 −10	10.92	32.23	+7 − 1	16.68	26.65	−1 + 7	22.51	26.47	−5 + 1
30	6.92	41.07	+6 − 8	11.08	31.98	+6 + 3	16.88	26.56	−3 + 6	22.69	26.56	−5 − 3
31	7.03	40.73	+7 − 4	11.25	31.73	+3 + 6	17.08	26.47	−5 + 3	22.87	26.65	−4 − 6
32				11.42	31.49	+1 + 8				23.05	26.75	−2 − 7

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+82° 53′ 20″	8.078	+8.016	+82° 53′ 30″	8.081	+8.019	+82° 53′ 50″	8.087	+8.025
30	8.081	+8.019	40	8.084	+8.022	60	8.091	+8.028

$\alpha_{1933.0} = 10^h\ 23^m\ 4^s.70$ $\delta_{1933.0} = +82°\ 54'\ 3''.34$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Ng) ε Ursae minoris $4^m.40$

Tag	Januar				Februar				März				April			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	16^h52^m	$+82°\ 8'$	in $0^s.01$	in $0''.01$	16^h52^m	$+82°\ 8'$	in $0^s.01$	in $0''.01$	16^h52^m	$+82°\ 8'$	in $0^s.01$	in $0''.01$	16^h52^m	$+82°\ 8'$	in $0^s.01$	in $0''.01$
	s	"			s	"			s	"			s	"		
1	37.43	43.75	−1	−11	40.38	34.97	+3	−3	44.55	31.38	+3	0	49.28	33.33	0	+10
2	37.49	43.42	0	−11	40.51	34.76	+3	+1	44.71	31.35	+2	+4	49.42	33.49	−1	+10
3	37.55	43.08	+1	−10	40.64	34.56	+2	+5	44.87	31.32	+1	+7	49.55	33.66	−2	+7
4	37.61	42.75	+2	−6	40.77	34.36	+1	+8	45.03	31.30	0	+10	49.69	33.83	−2	+4
5	37.67	42.42	+3	−2	40.91	34.16	0	+10	45.19	31.28	−1	+10	49.82	34.01	−2	0
6	37.74	42.09	+2	+2	41.05	33.97	−1	+10	45.35	31.27	−2	+9	49.95	34.19	−1	−5
7	37.81	41.77	+2	+6	41.19	33.79	−2	+8	45.50	31.27	−2	+6	50.08	34.38	0	−8
8	37.88	41.45	+1	+9	41.33	33.62	−2	+5	45.66	31.28	−2	+2	50.20	34.57	+1	−10
9	37.95	41.13	0	+10	41.48	33.45	−2	0	45.82	31.29	−2	−2	50.33	34.77	+2	−9
10	38.03	40.82	−1	+9	41.62	33.29	−2	−4	45.98	31.31	−1	−7	50.45	34.97	+3	−7
11	38.11	40.51	−2	+7	41.76	33.13	−1	−8	46.14	31.33	0	−9	50.57	35.18	+4	−2
12	38.19	40.21	−3	+3	41.91	32.98	+1	−10	46.29	31.36	+2	−10	50.69	35.39	+3	+3
13	38.28	39.91	−2	−1	42.06	32.83	+2	−10	46.45	31.40	+3	−9	50.80	35.61	+2	+8
14	38.37	39.61	−1	−6	42.21	32.69	+3	−8	46.61	31.45	+4	−5	50.92	35.83	0	+10
15	38.46	39.31	0	−9	42.36	32.56	+4	−3	46.77	31.50	+4	0	51.03	36.05	−2	+11
16	38.55	39.02	+1	−10	42.51	32.43	+3	+2	46.92	31.56	+3	+5	51.14	36.28	−3	+8
17	38.65	38.73	+3	−9	42.66	32.31	+2	+7	47.08	31.62	+1	+9	51.25	36.51	−4	+4
18	38.75	38.45	+4	−6	42.82	32.20	+1	+10	47.23	31.69	−1	+11	51.36	36.75	−4	−1
19	38.85	38.17	+4	−1	42.97	32.09	−1	+11	47.39	31.77	−2	+10	51.46	36.99	−3	−6
20	38.96	37.90	+3	+4	43.13	31.99	−3	+9	47.54	31.85	−3	+7	51.56	37.24	−2	−10
21	39.07	37.63	+2	+9	43.28	31.90	−4	+5	47.69	31.94	−4	+2	51.66	37.49	0	−11
22	39.18	37.36	0	+11	43.44	31.81	−4	0	47.84	32.04	−4	−3	51.76	37.75	+1	−11
23	39.29	37.10	−2	+11	43.60	31.73	−3	−5	47.99	32.14	−3	−8	51.86	38.01	+2	−8
24	39.40	36.84	−3	+8	43.76	31.65	−2	−9	48.14	32.25	−1	−11	51.95	38.27	+3	−4
25	39.51	36.59	−4	+3	43.91	31.58	−1	−11	48.29	32.36	0	−11	52.04	38.53	+3	+1
26	39.63	36.34	−4	−2	44.07	31.52	+1	−11	48.43	32.48	+2	−10	52.13	38.80	+2	+5
27	39.75	36.10	−3	−7	44.23	31.47	+2	−9	48.57	32.61	+2	−6	52.21	39.07	+1	+8
28	39.87	35.86	−2	−10	44.39	31.42	+3	−5	48.72	32.74	+3	−2	52.29	39.35	0	+10
29	39.99	35.63	0	−11	44.55	31.38	+3	0	48.86	32.88	+3	+2	52.37	39.63	−1	+10
30	40.12	35.41	+1	−10					49.00	33.03	+2	+6	52.45	39.91	−2	+9
31	40.25	35.19	+2	−7					49.14	33.18	+1	+9	52.52	40.19	−2	+5
32	40.38	34.97	+3	−3					49.28	33.33	0	+10				

δ	sec δ	tg δ	δ	sec δ	tg δ
$+82°\ 8'\ 30''$	7.314	+7.245	$+82°\ 8'\ 40''$	7.317	+7.248
40	7.317	+7.248	50	7.319	+7.250

$\alpha_{1933.0} = 16^h\ 52^m\ 45^s.95$ $\delta_{1933.0} = +82°\ 9'\ 1''.46$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Ng) ε Ursae minoris $4^m.40$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder		Juni AR.	Juni Dekl.	Juni ☾ Glieder		Juli AR.	Juli Dekl.	Juli ☾ Glieder		August AR.	August Dekl.	August ☾ Glieder	
	16^h52^m	+82° 8′	in 0.01 s	in 0.01″	16^h52^m	+82° 8′	in 0.01 s	in 0.01″	16^h52^m	+82° 8′	in 0.01 s	in 0.01″	16^h52^m	+82° 9′	in 0.01 s	in 0.01″
	s	″			s	″			s	″			s			
1	52.52	40.19	−2	+5	53.51	49.91	0	−8	51.85	59.31	+4	−3	47.99	5.98	0	+11
2	52.59	40.48	−2	+1	53.50	50.23	+2	−10	51.75	59.58	+4	+3	47.84	6.13	−2	+10
3	52.66	40.77	−2	−3	53.48	50.55	+3	−8	51.66	59.85	+3	+7	47.69	6.28	−3	+7
4	52.73	41.06	−1	−7	53.46	50.87	+4	−5	51.56	60.11	+1	+10	47.53	6.42	−4	+2
5	52.80	41.36	+1	−9	{53.44 53.42	51.20 51.52	+4 +3	−11 +4}	51.46	60.37	−1	+11	47.37	6.56	−3	−3
6	52.86	41.66	+2	−10	53.39	51.84	+2	+9	51.36	60.63	−3	+9	47.21	6.69	−3	−8
7	52.92	41.96	+3	−8	53.36	52.16	0	+11	51.26	60.88	−4	+5	47.05	6.82	−1	−11
8	52.97	42.26	+4	−4	53.33	52.47	−2	+11	51.15	61.13	−4	0	46.89	6.94	0	−11
9	53.03	42.56	+4	+1	53.29	52.79	−3	+8	51.03	61.38	−4	−5	46.73	7.06	+1	−10
10	53.08	42.87	+3	+6	53.25	53.11	−4	+3	50.92	61.62	−2	−9	46.56	7.17	+2	−6
11	53.13	43.18	+1	+10	53.21	53.42	−4	−3	50.81	61.86	−1	−12	46.40	7.28	+2	−2
12	53.17	43.49	−1	+11	53.17	53.73	−3	−7	50.69	62.10	+1	−11	46.24	7.38	+2	+3
13	53.21	43.80	−3	+9	53.13	54.04	−2	−11	50.57	62.33	+2	−9	46.07	7.48	+1	+6
14	53.25	44.11	−4	+6	53.08	54.35	0	−11	50.46	62.56	+2	−5	45.90	7.57	0	+9
15	53.29	44.42	−4	+1	53.03	54.66	+1	−10	50.34	62.78	+2	0	45.73	7.66	−1	+10
16	53.33	44.74	−4	−4	52.97	54.97	+2	−7	50.21	63.00	+2	+4	45.56	7.74	−2	+8
17	53.36	45.06	−3	−9	52.92	55.28	+2	−3	50.09	63.22	+1	+7	45.39	7.82	−2	+6
18	53.39	45.38	−1	−11	52.86	55.58	+2	+1	49.96	63.43	0	+9	45.22	7.90	−3	+3
19	53.42	45.70	0	−11	52.80	55.88	+2	+5	49.83	63.64	−1	+10	45.05	7.97	−2	−1
20	53.44	46.02	+2	−9	52.73	56.18	+1	+8	49.70	63.85	−2	+8	44.87	8.03	−2	−5
21	53.46	46.35	+2	−6	52.66	56.47	0	+10	49.56	64.05	−3	+5	44.70	8.09	0	−8
22	53.48	46.67	+3	−1	52.59	56.77	−1	+9	49.43	64.25	−3	+1	44.53	8.15	+1	−10
23	53.50	46.99	+2	+3	52.52	57.06	−2	+7	49.29	64.44	−2	−3	44.35	8.20	+2	−9
24	53.51	47.31	+1	+7	52.45	57.35	−2	+4	49.15	64.63	−1	−7	44.17	8.24	+4	−6
25	53.52	47.64	0	+9	52.37	57.64	−2	0	49.01	64.81	0	−9	43.99	8.28	+4	−2
26	53.53	47.96	−1	+10	52.29	57.93	−2	−4	48.87	64.99	+2	−10	43.81	8.31	+4	+3
27	53.53	48.29	−2	+9	52.21	58.21	0	−7	48.73	65.17	+3	−8	43.63	8.34	+2	+8
28	53.53	48.61	−2	+7	52.12	58.49	+1	−9	48.59	65.34	+4	−4	43.46	8.37	+1	+11
29	53.53	48.93	−2	+3	52.03	58.77	+3	−9	48.44	65.51	+4	0	43.28	8.39	−1	+11
30	53.53	49.26	−2	−2	51.94	59.04	+4	−7	48.29	65.67	+3	+5	43.10	8.40	−3	+9
31	53.52	49.58	−1	−6	51.85	59.31	+4	−3	48.14	65.83	+2	+9	42.92	8.41	−4	+4
32	53.51	49.91	0	−8					47.99	65.98	0	+11	42.74	8.42	−4	−1

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+82° 8′ 40″	7.317	+7.248	+82° 8′ 50″	7.319	+7.250	+82° 9′ 0″	7.322	+7.253
50	7.319	+7.250	60	7.322	+7.253	10	7.324	+7.256

$\alpha_{1933.0} = 16^h\ 52^m\ 45^s.95$ $\delta_{1933.0} = +82°\ 9'\ 1''.46$

Ng) ε Ursae minoris $4^m.40$

Tag	September				Oktober				November				Dezember			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	16^h52^m	+82° 9′	in ^{s} 0.01	in $''$ 0.01	16^h52^m	+82° 8′	in ^{s} 0.01	in $''$ 0.01	16^h52^m	+82° 8′	in ^{s} 0.01	in $''$ 0.01	16^h52^m	+82° 8′	in ^{s} 0.01	in $''$ 0.01
	s	″			s	″			s	″			s	″		
1	42.74	8.42	−4	−1	37.39	66.20	−1	−11	32.76	59.46	+3	−3	30.24	49.78	+1	+8
2	42.56	8.42	−3	−6	37.22	66.05	+1	−11	32.64	59.18	+2	+2	30.20	49.43	0	+9
3	42.38	8.41	−2	−10	37.05	65.89	+1	−9	32.52	58.89	+1	+6	30.16	49.07	−1	+10
4	42.20	8.40	0	−12	36.89	65.73	+3	−5	32.40	58.60	0	+9	*)30.13	48.71	−2	+8
5	42.02	8.38	+1	−11	36.72	65.56	+3	−1	32.29	58.31	−1	+10	30.10	48.36	−2	+5
6	41.84	8.36	+2	−8	36.56	65.39	+2	+4	32.18	58.01	−2	+9	30.07	48.00	−2	+1
7	41.65	8.34	+2	−3	36.39	65.22	+1	+7	32.07	57.71	−2	+7	30.04	47.65	−2	−3
8	41.47	8.31	+2	+1	36.23	65.04	0	+9	31.96	57.41	−2	+3	30.02	47.29	−1	−6
9	41.29	8.27	+2	+5	36.07	64.85	−1	+9	31.86	57.10	−2	0	30.00	46.93	+1	−9
10	41.11	8.23	+1	+8	35.90	64.66	−2	+8	31.76	56.79	−1	−4	29.98	46.57	+2	−9
11	40.93	8.18	0	+10	35.74	64.47	−2	+6	31.66	56.48	0	−7	29.97	46.22	+3	−7
12	40.75	8.13	−1	+10	35.58	64.28	−2	+2	31.56	56.17	+1	−9	29.96	45.86	+4	−4
13	40.57	8.07	−2	+7	35.42	64.08	−2	−2	31.47	55.86	+2	−9	29.95	45.50	+4	+1
14	40.39	8.01	−3	+4	35.27	63.87	−1	−6	31.38	55.54	+3	−6	29.94	45.14	+3	+5
15	40.21	7.94	−3	+1	35.11	63.66	0	−9	31.29	55.22	+4	−2	29.94	44.78	+2	+9
16	40.03	7.87	−2	−4	34.96	63.45	+1	−10	31.20	54.89	+4	+2	29.94	44.42	0	+11
17	39.85	7.79	−1	−7	34.81	63.23	+3	−9	31.12	54.56	+3	+7	29.95	44.06	−2	+10
18	39.67	7.71	0	−9	34.66	63.01	+4	−5	31.04	54.23	+1	+10	29.96	43.71	−3	+7
19	39.50	7.62	+2	−10	34.51	62.78	+4	−1	30.96	53.90	−1	+11	29.97	43.35	−4	+2
20	39.32	7.53	+3	−8	34.36	62.55	+3	+4	30.88	53.57	−2	+9	29.98	43.00	−4	−3
21	39.14	7.43	+4	−4	34.22	62.31	+2	+8	30.81	53.24	−4	+5	30.00	42.64	−3	−8
22	38.96	7.33	+3	+1	34.08	62.07	0	+10	30.74	52.90	−4	0	30.02	42.29	−1	−11
23	38.79	7.22	+3	+6	33.94	61.83	−2	+10	30.67	52.56	−4	−5	30.05	41.94	0	−12
24	38.61	7.11	+1	+10	33.80	61.58	−3	+8	30.61	52.22	−2	−9	30.07	41.59	+1	−10
25	38.43	6.99	0	+11	33.66	61.33	−4	+3	30.55	51.87	−1	−12	30.10	41.24	+2	−6
26	38.26	6.87	−2	+10	33.53	61.07	−4	−2	30.49	51.52	+1	−11	30.13	40.89	+2	−2
27	38.08	6.75	−3	+6	33.40	60.81	−3	−7	30.43	51.18	+2	−9	30.17	40.54	+2	+3
28	37.91	6.62	−4	+1	33.27	60.55	−2	−10	30.38	50.83	+2	−4	30.21	40.20	+1	+7
29	37.74	6.48	−3	−4	33.14	60.28	0	−12	30.33	50.48	+2	0	30.25	39.85	0	+9
30	37.56	6.34	−2	−8	33.01	60.01	+1	−10	30.28	50.13	+2	+5	30.30	39.51	−1	+10
31	37.39	6.20	−1	−11	32.88	59.74	+2	−7	30.24	49.78	+1	+8	30.35	39.17	−2	+8
32					32.76	59.46	+3	−3					30.40	38.83	−3	+6

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+82° 8′ 30″	7.314	+7.245	+82° 8′ 50″	7.319	+7.250	+82° 9′ 0″	7.322	+7.253
40	7.317	+7.248	60	7.322	+7.253	10	7.324	+7.256

$\alpha_{1933.0} = 16^h\ 52^m\ 45^s.95$ $\delta_{1933.0} = +82°\ 9'\ 1''.46$

*) Tag der doppelten unteren Kulmination: Dez. 4

Obere Kulmination Greenwich

Nh) δ Ursae minoris $4^{m}.44$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder		Februar AR.	Februar Dekl.	Februar ☾ Glieder		März AR.	März Dekl.	März ☾ Glieder		April AR.	April Dekl.	April ☾ Glieder	
	17^h53^m	+86° 36′	in 0.01 s	in 0.01 ″	17^h53^m	+86° 36′	in 0.01 s	in 0.01 ″	17^h53^m	+86° 36′	in 0.01 s	in 0.01 ″	17^h53^m	+86° 36′	in 0.01 s	in 0.01 ″
	s	″			s	″			s	″			s	″		
1	24.76	35.03	−8	−9	28.45	25.41	+6	−5	36.47	20.00	+7	−2	47.35	19.50	+3	+10
2	24.77	34.69	−3	−11	28.68	25.15	+8	−1	36.81	19.89	+8	+2	47.69	19.59	0	+10
3	24.79	34.36	+1	−10	28.91	24.89	+7	+3	37.15	19.79	+7	+6	48.03	19.68	−3	+9
4	24.82	34.02	+4	−7	29.14	24.64	+6	+7	37.49	19.69	+5	+9	48.37	19.78	−5	+5
5	24.86	33.68	+7	−4	29.38	24.39	+4	+9	37.84	19.59	+2	+10	48.70	19.88	−6	+1
6	24.90	33.35	+8	+1	29.63	24.15	+1	+10	38.18	19.50	−1	+10	49.04	19.99	−6	−4
7	24.95	33.01	+7	+5	29.88	23.91	−2	+9	38.53	19.42	−4	+7	49.37	20.10	−4	−8
8	25.01	32.68	+5	+8	30.14	23.68	−5	+6	38.88	19.35	−6	+4	49.70	20.22	0	−10
9	25.08	32.35	+3	+10	30.40	23.45	−7	+2	39.23	19.28	−7	−1	50.03	20.35	+3	−11
10	25.15	32.02	−1	+10	30.66	23.22	−7	−2	39.58	19.22	−6	−5	50.35	20.48	+7	−9
11	25.23	31.69	−4	+8	30.93	23.00	−5	−7	39.94	19.16	−3	−9	50.67	20.62	+10	−5
12	25.32	31.37	−6	+5	31.21	22.79	−2	−10	40.29	19.11	+1	−11	50.98	20.76	+10	+1
13	25.41	31.05	−7	0	31.49	22.58	+2	−11	40.64	19.07	+5	−10	51.29	20.91	+8	+6
14	25.51	30.73	−6	−4	31.77	22.38	+6	−9	41.00	19.04	+8	−7	51.60	21.06	+4	+9
15	25.62	30.41	−4	−8	32.05	22.18	+9	−6	41.35	19.01	+10	−3	51.91	21.22	−1	+11
16	25.73	30.09	0	−10	32.34	21.99	+10	−1	41.70	18.99	+10	+3	52.21	21.39	−6	+10
17	25.85	29.77	+4	−10	32.64	21.80	+9	+5	42.06	18.97	+7	+8	52.51	21.56	−10	+7
18	25.98	29.46	+8	−8	32.94	21.62	+6	+9	42.41	18.96	+2	+11	52.80	21.73	−12	+2
19	26.12	29.15	+11	−4	33.24	21.44	+1	+11	42.77	18.96	−3	+11	53.09	21.91	−12	−3
20	26.26	28.84	+11	+2	33.55	21.27	−4	+11	43.13	18.96	−7	+9	53.38	22.10	−9	−8
21	26.41	28.53	+8	+7	33.86	21.11	−8	+8	43.48	18.97	−11	+5	53.66	22.29	−5	−10
22	26.57	28.23	+4	+10	34.18	20.95	−11	+3	43.84	18.99	−11	0	53.94	22.48	−1	−11
23	26.73	27.93	−1	+11	34.50	20.79	−11	−2	44.19	19.01	−10	−5	54.21	22.68	+3	−9
24	26.90	27.63	−6	+10	34.82	20.64	−9	−7	44.54	19.04	−7	−9	54.48	22.88	+6	−5
25	27.07	27.34	−10	+6	35.14	20.50	−6	−10	44.90	19.07	−3	−11	54.75	23.09	+8	−1
26	27.25	27.05	−11	+1	35.47	20.37	−2	−11	45.25	19.11	+1	−10	55.01	23.30	+8	+3
27	27.43	26.77	−11	−4	35.80	20.24	+2	−9	45.60	19.16	+5	−8	55.27	23.52	+6	+7
28	27.62	26.49	−8	−8	36.13	20.12	+5	−6	45.96	19.22	+7	−4	55.52	23.74	+4	+9
29	27.82	26.21	−5	−11	36.47	20.00	+7	−2	46.31	19.28	+8	0	55.77	23.97	+1	+10
30	28.02	25.94	−1	−10					46.66	19.35	+7	+5	56.01	24.20	−2	+9
31	28.23	25.67	+3	−8					47.01	19.42	+6	+8	56.25	24.44	−4	+7
32	28.45	25.41	+6	−5					47.35	19.50	+3	+10				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+86° 36′ 10″	16.875	+16.846	+86° 36′ 20″	16.889	+16.860	+86° 36′ 30″	16.903	+16.873
20	16.889	+16.860	30	16.903	+16.873	40	16.917	+16.887

$\alpha_{1933.0} = 17^h\ 53^m\ 49^s.43$ $\delta_{1933.0} = +86°\ 36'\ 47''.31$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Nh) δ Ursae minoris $4^{m}.44$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder		Juni AR.	Juni Dekl.	Juni ☾ Glieder		Juli AR.	Juli Dekl.	Juli ☾ Glieder		August AR.	August Dekl.	August ☾ Glieder	
	$17^h 53^m$	+86° 36′	in 0.01 s	in 0.01 ″	$17^h 53^m$	+86° 36′	in 0.01 s	in 0.01 ″	$17^h 53^m$	+86° 36′	in 0.01 s	in 0.01 ″	$17^h 53^m$	+86° 36′	in 0.01 s	in 0.01 ″
	s	″			s	″			s	″			s	″		
1	56.25	24.44	− 4	+ 7	60.80	33.27	− 2	− 8	59.31	43.22	+11	− 5	52.09	51.69	+ 4	+11
2	56.48	24.68	− 6	+ 3	60.85	33.59	+ 1	−10	59.16	43.53	+12	0	51.78	51.92	− 1	+11
3	56.71	24.92	− 6	− 2	60.89	33.91	+ 5	−10	59.01	43.83	+10	+ 5	51.47	52.14	− 6	+ 9
4	56.93	25.17	− 4	− 6	60.93	34.23	+ 9	− 8	58.85	44.14	+ 7	+ 9	51.15	52.36	−10	+ 5
5	57.15	25.42	− 1	− 9	60.96	34.55	+11	− 4	58.68	44.44	+ 2	+11	50.82	52.57	−11	0
6	57.36	25.67	+ 2	−11	60.98	34.87	+11	+ 2	58.51	44.74	− 4	+11	50.49	52.78	−10	− 5
7	57.56	25.93	+ 6	−10	60.99	35.20	+ 9	+ 7	58.33	45.04	− 8	+ 8	50.16	52.99	− 8	− 9
8	57.76	26.19	+ 9	− 6	61.00	35.52	+ 4	+10	58.15	45.34	−11	+ 3	49.82	53.19	− 4	−11
9	57.96	26.46	+11	− 2	61.00	35.85	− 1	+11	57.96	45.64	−12	− 2	49.48	53.39	0	−10
10	58.15	26.73	+10	+ 4	61.00	36.17	− 6	+10	57.76	45.93	−10	− 7	49.13	53.59	+ 4	− 8
11	58.33	27.00	+ 6	+ 8	60.99	36.49	−10	+ 6	57.56	46.22	− 7	−10	48.78	53.78	+ 6	− 4
12	58.51	27.27	+ 1	+11	60.98	36.82	−12	+ 1	57.35	46.51	− 3	−11	48.43	53.97	+ 7	+ 1
13	58.68	27.55	− 4	+11	60.96	37.14	−12	− 5	57.14	46.79	+ 1	− 9	48.07	54.15	+ 6	+ 5
14	58.84	27.83	− 9	+ 8	60.93	37.46	− 9	− 9	56.92	47.07	+ 5	− 6	47.71	54.33	+ 4	+ 8
15	59.00	28.11	−12	+ 4	60.89	37.79	− 5	−11	56.70	47.35	+ 6	− 2	47.35	54.51	+ 1	+10
16	59.16	28.40	−12	− 1	60.85	38.11	− 1	−11	56.47	47.63	+ 7	+ 3	46.98	54.68	− 2	+10
17	59.31	28.69	−11	− 6	60.80	38.44	+ 3	− 8	56.23	47.90	+ 6	+ 6	46.61	54.85	− 4	+ 8
18	59.45	28.98	− 7	− 9	60.74	38.77	+ 6	− 5	55.99	48.17	+ 3	+ 9	46.23	55.01	− 6	+ 5
19	59.59	29.27	− 3	−11	60.68	39.09	+ 7	0	55.75	48.44	0	+10	45.85	55.17	− 7	+ 1
20	59.72	29.57	+ 1	−10	{60.61 60.53	39.41 39.74	+ 7 + 5	+ 4} + 7}	55.50	48.71	− 3	+ 9	45.47	55.33	− 6	− 4
21	59.84	29.87	+ 5	− 7	60.45	40.06	+ 2	+ 9	55.24	48.98	− 5	+ 7	45.09	55.48	− 4	− 7
22	59.96	30.17	+ 7	− 3	60.36	40.38	0	+10	54.98	49.24	− 7	+ 3	44.71	55.63	− 1	−10
23	60.07	30.47	+ 7	+ 1	60.27	40.70	− 3	+ 9	54.71	49.50	− 7	− 1	44.32	55.77	+ 4	−10
24	60.17	30.78	+ 7	+ 5	60.17	41.02	− 5	+ 6	54.44	49.76	− 5	− 5	43.93	55.91	+ 8	− 8
25	60.27	31.08	+ 5	+ 8	60.07	41.33	− 7	+ 2	54.16	50.01	− 2	− 9	43.53	56.04	+10	− 5
26	60.37	31.39	+ 2	+10	59.96	41.65	− 6	− 3	53.88	50.26	+ 1	−11	43.13	56.17	+11	0
27	60.46	31.70	− 1	+10	59.84	41.97	− 4	− 7	53.59	50.51	+ 6	−10	42.73	56.29	+ 9	+ 6
28	60.54	32.01	− 4	+ 8	59.72	42.29	0	−10	53.30	50.75	+ 9	− 7	42.33	56.41	+ 6	+10
29	60.62	32.32	− 6	+ 4	59.59	42.60	+ 4	−11	53.01	50.99	+11	− 3	41.92	56.52	+ 1	+11
30	60.69	32.64	− 6	0	59.45	42.91	+ 8	− 9	52.71	51.23	+11	+ 3	41.51	56.63	− 4	+10
31	60.75	32.96	− 5	− 4	59.31	43.22	+11	− 5	52.40	51.46	+ 9	+ 7	41.10	56.74	− 8	+ 7
32	60.80	33.27	− 2	− 8					52.09	51.69	+ 4	+11	40.69	56.84	−11	+ 2

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+86° 36′ 20″	16.889	+16.860	+86° 36′ 30″	16.903	+16.873	+86° 36′ 50″	16.931	+16.901
30	16.903	+16.873	40	16.917	+16.887	60	16.945	+16.915

$\alpha_{1933.0} = 17^h\ 53^m\ 49^s.43$ $\delta_{1933.0} = +86°\ 36'\ 47''.31$

Nh) δ Ursae minoris $4^{m}.44$

Tag	September AR. 17^h53^m s	September Dekl. $+86°\ 36'$ "	September ☾ Glieder in s 0.01	September ☾ Glieder in " 0.01	Oktober AR. 17^h53^m s	Oktober Dekl. $+86°\ 36'$ "	Oktober ☾ Glieder in s 0.01	Oktober ☾ Glieder in " 0.01
1	40.69	56.84	−11	+ 2	27.81	57.63	− 6	−10
2	40.28	56.94	−11	− 3	27.38	57.58	− 2	−11
3	39.87	57.03	− 8	− 8	26.94	57.53	+ 2	−10
4	39.45	57.12	− 5	−11	26.51	57.47	+ 5	− 7
5	39.03	57.20	− 1	−11	26.08	57.41	+ 7	− 2
6	38.61	57.28	+ 3	− 9	25.65	57.34	+ 7	+ 2
7	38.18	57.35	+ 6	− 5	25.22	57.26	+ 6	+ 6
8	37.76	57.42	+ 7	− 1	24.80	57.18	+ 4	+ 9
9	37.33	57.48	+ 7	+ 4	24.37	57.10	+ 1	+10
10	36.91	57.54	+ 5	+ 7	23.95	57.01	− 2	+ 9
11	36.48	57.59	+ 2	+ 9	23.53	56.91	− 5	+ 7
12	36.05	57.64	0	+10	23.11	56.81	− 6	+ 4
13	35.62	57.68	− 3	+ 9	22.69	56.71	− 6	0
14	35.19	57.72	− 6	+ 6	22.28	56.60	− 5	− 5
15	34.76	57.75	− 7	+ 2	21.87	56.49	− 3	− 8
16	34.32	57.78	− 7	− 2	21.46	56.37	+ 1	−10
17	33.89	57.81	− 5	− 6	21.05	56.25	+ 5	−10
18	33.46	57.83	− 2	− 9	20.64	56.12	+ 8	− 8
19	33.02	57.84	+ 2	−10	20.23	55.98	+10	− 4
20	32.59	57.85	+ 6	− 9	19.83	55.84	+10	+ 2
21	32.16	57.86	+ 9	− 6	19.43	55.70	+ 8	+ 7
22	31.72	57.86	+11	− 2	19.03	55.55	+ 4	+10
23	31.29	57.85	+10	+ 4	18.64	55.40	− 1	+11
24	30.85	57.84	+ 7	+ 8	18.25	55.24	− 6	+10
25	30.41	57.83	+ 2	+11	17.86	55.08	−10	+ 6
26	29.98	57.81	− 3	+11	17.47	54.91	−12	+ 1
27	29.54	57.78	− 7	+ 8	17.09	54.74	−11	− 5
28	29.11	57.75	−10	+ 4	16.71	54.56	− 8	− 9
29	28.68	57.72	−11	− 1	16.33	54.38	− 4	−11
30	28.24	57.68	− 9	− 6	15.96	54.20	0	−10
31	27.81	57.63	− 6	−10	15.59	54.01	+ 4	− 8
32					15.23	53.82	+ 6	− 4

Tag	November AR. 17^h53^m s	November Dekl. $+86°\ 36'$ "	November ☾ Glieder in s 0.01	November ☾ Glieder in " 0.01	Dezember AR. 17^h53^m s	Dezember Dekl. $+86°\ 36'$ "	Dezember ☾ Glieder in s 0.01	Dezember ☾ Glieder in " 0.01
1	15.23	53.82	+ 6	− 4	6.48	46.18	+ 5	+ 7
2	14.87	53.62	+ 7	0	6.27	45.88	+ 3	+ 9
3	14.51	53.42	+ 7	+ 5	6.07	45.57	0	+10
4	14.16	53.21	+ 5	+ 8	5.88	45.26	− 3	+ 9
5	13.81	53.00	+ 2	+10	5.69	44.95	− 5	+ 6
6	13.47	52.79	− 1	+10	5.51	44.63	− 6	+ 3
7	13.13	52.57	− 4	+ 8	5.34	44.31	− 6	− 1
8	12.79	52.34	− 6	+ 5	5.18	43.99	− 5	− 5
9	12.46	52.11	− 6	+ 1	5.02	43.67	− 2	− 9
10	12.13	51.88	− 6	− 3	4.87	43.35	+ 2	−10
11	11.81	51.65	− 3	− 7	4.72	43.03	+ 6	− 9
12	11.49	51.41	0	− 9	4.58	42.70	+10	− 7
13	11.18	51.16	+ 4	−10	4.45	42.37	+12	− 2
14	10.87	50.91	+ 7	− 9	4.33	42.04	+11	+ 3
15	10.57	50.66	+10	− 5	4.21	41.71	+ 9	+ 7
16	10.27	50.41	+11	− 1	4.10	41.38	+ 4	+10
17	9.98	50.15	+10	+ 5	4.00	41.04	− 1	+11
18	9.69	49.89	+ 6	+ 9	3.91	40.71	− 6	+ 9
19	9.41	49.62	+ 1	+11	3.82	40.37	−10	+ 5
20	9.13	49.35	− 4	+11	*)3.74	40.04	−12	0
21	8.86	49.08	− 9	+ 8	3.66	39.70	−11	− 5
22	8.60	48.80	−11	+ 3	3.59	39.36	− 8	− 9
23	8.34	48.52	−12	− 2	3.53	39.02	− 4	−11
24	8.09	48.24	−10	− 7	3.48	38.68	0	−10
25	7.84	47.95	− 6	−10	3.43	38.34	+ 4	− 7
26	7.60	47.66	− 2	−11	3.39	38.00	+ 6	− 3
27	7.36	47.37	+ 2	− 9	3.36	37.66	+ 6	+ 2
28	7.13	47.08	+ 5	− 6	3.34	37.33	+ 5	+ 6
29	6.91	46.78	+ 7	− 1	3.32	36.99	+ 3	+ 9
30	6.69	46.48	+ 7	+ 3	3.31	36.65	0	+10
31	6.48	46.18	+ 5	+ 7	3.31	36.31	− 3	+ 9
32					3.32	35.98	− 5	+ 7

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+86° 36′ 30″	16.903	+16.873	+86° 36′ 40″	16.917	+16.887	+86° 36′ 50″	16.931	+16.901
40	16.917	+16.887	50	16.931	+16.901	60	16.945	+16.915

$\alpha_{1933.0} = 17^h\ 53^m\ 49^s.43$ $\delta_{1933.0} = +86°\ 36'\ 47''.31$

*) Tag der doppelten unteren Kulmination: Dez. 20

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Ni) λ Ursae minoris $6^{m}.55$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder in 0.01 s	Januar ☾ Glieder in 0.01″	Februar AR.	Februar Dekl.	Februar ☾ Glieder in 0.01 s	Februar ☾ Glieder in 0.01″
	$18^{h}41^{m}$ s	+89° 1′ ″	s 0.01	″ 0.01	$18^{h}41^{m}$ s	+89° 1′ ″	s 0.01	″ 0.01
1	*)25.10	68.48	−37	−8	29.23	58.59	+19	−6
2	24.85	68.16	−22	−10	29.76	58.30	+28	−2
3	24.62	67.83	−5	−10	30.31	58.01	+32	+2
4	24.42	67.50	+11	−8	30.89	57.72	+30	+6
5	24.24	67.17	+23	−5	31.49	57.44	+22	+8
6	24.09	66.85	+30	−1	32.11	57.16	+11	+10
7	23.97	66.52	+31	+3	32.75	56.89	−2	+9
8	23.87	66.19	+27	+7	33.41	56.62	−15	+7
9	23.79	65.85	+18	+9	34.10	56.35	−24	+3
10	23.75	65.52	+6	+10	34.80	56.09	−28	−1
11	23.73	65.20	−7	+9	35.53	55.83	−25	−6
12	23.74	64.87	−19	+6	36.28	55.58	−15	−9
13	23.77	64.54	−27	+2	37.05	55.33	0	−11
14	23.83	64.22	−28	−3	37.84	55.08	+17	−11
15	23.91	63.89	−21	−7	38.65	54.84	+31	−8
16	24.02	63.57	−8	−10	39.48	54.60	+39	−3
17	24.16	63.24	+9	−11	40.32	54.37	+39	+3
18	24.32	62.92	+25	−10	41.19	54.14	+29	+8
19	24.51	62.60	+38	−6	42.07	53.92	+12	+11
20	24.72	62.28	+43	0	42.97	53.70	−8	+11
21	24.96	61.96	+38	+5	43.88	53.48	−26	+9
22	25.22	61.64	+25	+9	44.81	53.27	−39	+5
23	25.51	61.33	+5	+11	45.76	53.07	−45	0
24	25.83	61.02	−15	+11	46.72	52.87	−41	−5
25	26.17	60.70	−33	+8	47.70	52.67	−31	−8
26	26.53	60.39	−43	+3	48.69	52.48	−15	−10
27	26.92	60.09	−46	−2	49.70	52.29	+1	−10
28	27.33	59.78	−39	−6	50.72	52.11	+16	−7
29	27.77	59.48	−27	−9	51.76	51.94	+27	−4
30	28.23	59.18	−10	−10				
31	28.72	58.89	+6	−9				
32	29.23	58.59	+19	−6				

Tag	März AR.	März Dekl.	März ☾ Glieder in 0.01 s	März ☾ Glieder in 0.01″	April AR.	April Dekl.	April ☾ Glieder in 0.01 s	April ☾ Glieder in 0.01″
	$18^{h}41^{m}$ s	+89° 1′ ″	s 0.01	″ 0.01	$18^{h}42^{m}$ s	+89° 1′ ″	s 0.01	″ 0.01
1	51.76	51.94	+27	−4	28.07	49.48	+20	+9
2	52.81	51.77	+32	0	29.29	49.50	+9	+10
3	53.87	51.61	+31	+4	30.51	49.53	−4	+9
4	54.94	51.45	+26	+7	31.73	49.56	−15	+6
5	56.03	51.30	+16	+9	32.94	49.60	−23	+2
6	57.13	51.15	+3	+10	34.15	49.64	−25	−2
7	58.23	51.01	−10	+8	35.35	49.69	−21	−7
8	59.35	50.88	−20	+5	36.55	49.75	−10	−10
9	60.48	50.75	−27	+1	37.75	49.81	+5	−11
10	61.62	50.63	−27	−4	38.94	49.88	+21	−10
11	62.76	50.51	−19	−8	40.12	49.95	+33	−7
12	63.92	50.40	−6	−11	41.30	50.03	+39	−2
13	65.08	50.30	+10	−11	42.47	50.12	+35	+4
14	66.25	50.20	+25	−9	43.64	50.21	+23	+8
15	67.43	50.11	+36	−5	44.79	50.31	+5	+11
16	68.61	50.02	+39	+1	45.94	50.41	−15	+11
17	69.80	49.94	+32	+6	47.09	50.52	−33	+9
18	71.00	49.87	+18	+10	48.22	50.63	−45	+4
19	72.20	49.80	−1	+11	49.34	50.75	−48	−1
20	73.41	49.74	−21	+10	50.45	50.88	−42	−6
21	74.62	49.68	−37	+7	51.56	51.01	−29	−9
22	75.83	49.63	−45	+2	52.65	51.15	−12	−10
23	77.05	49.59	−44	−3	53.73	51.29	+5	−9
24	78.27	49.55	−35	−7	54.80	51.44	+19	−6
25	79.49	49.52	−21	−10	55.86	51.59	+28	−3
26	80.71	49.50	−5	−10	56.91	51.75	+32	+1
27	81.94	49.48	+11	−8	57.95	51.91	+30	+5
28	83.16	49.47	+24	−5	58.97	52.08	+23	+8
29	84.39	49.46	+31	−1	59.98	52.26	+13	+9
30	85.62	49.46	+33	+3	60.97	52.44	+1	+9
31	86.84	49.47	+29	+7	61.95	52.62	−11	+7
32	88.07	49.48	+20	+9				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+89° 1′ 40″	58.936	+58.927	+89° 1′ 50″	59.104	+59.096	+89° 2′ 0″	59.274	+59.266
50	59.104	+59.096	60	59.274	+59.266	10	59.445	+59.437

$\alpha_{1933.0} = 18^{h}\ 43^{m}\ 0^{s}.99$ $\delta_{1933.0} = +89°\ 2'\ 15''.77$

*) Tag der doppelten unteren Kulmination: Jan. 1

Ni) λ Ursae minoris $6^{m}.55$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder		Juni AR.	Juni Dekl.	Juni ☾ Glieder	
	$18^{h}43^{m}$	+89° 1′	in 0.01 s	in 0.01 ″	$18^{h}43^{m}$	+89° 2′	in 0.01 s	in 0.01 ″
	s	″			s	″		
1	1.95	52.62	−11	+7	24.00	0.32	−16	−8
2	2.92	52.81	−20	+4	24.40	0.62	−3	−11
3	3.87	53.00	−24	−1	24.78	0.92	+13	−11
4	4.81	53.20	−21	−5	25.14	1.23	+29	−9
5	5.73	53.40	−12	−9	25.47	1.53	+40	−6
6	6.64	53.61	+1	−11	25.79	1.84	+44	−1
7	7.53	53.82	+17	−11	26.08	2.15	+39	+5
8	8.41	54.03	+31	−8	26.35	2.46	+24	+9
9	9.27	54.25	+40	−4	26.60	2.77	+4	+11
10	10.12	54.47	+40	+2	26.83	3.09	−17	+11
11	10.94	54.70	+31	+7	27.04	3.40	−36	+8
12	11.75	54.93	+14	+10	27.22	3.72	−47	+3
13	12.54	55.17	−7	+11	27.38	4.04	−49	−2
14	13.31	55.41	−27	+10	27.52	4.35	−42	−7
15	14.07	55.65	−42	+6	27.64	4.67	−29	−9
16	14.81	55.90	−49	+1	27.74	5.00	−12	−10
17	15.53	56.15	−47	−5	27.81	5.32	+5	−9
18	16.23	56.41	−37	−8	27.86	5.65	+18	−6
19	16.92	56.67	−21	−10	27.88	5.97	+27	−2
20	17.58	56.93	−3	−10	27.89	6.30	+29	+2
21	18.23	57.20	+12	−8	27.87	6.62	+25	+6
22	18.85	57.47	+24	−4	27.83	6.95	+17	+9
23	19.46	57.74	+30	0	27.77	7.28	+6	+10
24	20.05	58.02	+30	+4	27.68	7.61	−6	+9
25	20.61	58.30	+24	+7	27.58	7.93	−16	+7
26	21.16	58.58	+15	+9	27.45	8.26	−24	+3
27	21.68	58.86	+4	+10	27.30	8.59	−26	−2
28	22.19	59.15	−8	+8	27.13	8.92	−21	−6
29	22.67	59.44	−18	+5	26.93	9.24	−10	−9
30	23.13	59.73	−24	+1	26.71	9.57	+6	−11
31	23.58	60.03	−23	−3	26.47	9.89	+23	−11
32	24.00	60.32	−16	−8				

Tag	Juli AR.	Juli Dekl.	Juli ☾ Glieder		August AR.	August Dekl.	August ☾ Glieder	
	$18^{h}43^{m}$	+89° 2′	in 0.01 s	in 0.01 ″	$18^{h}42^{m}$	+89° 2′	in 0.01 s	in 0.01 ″
	s	″			s	″		
1	26.47	9.89	+23	−11	67.60	19.79	+25	+9
2	26.21	10.22	+37	−8	66.69	20.07	+5	+11
3	25.93 25.62	10.55 10.87	+45 +44	−3 +3	65.76	20.34	−16	+10
4	25.29	11.20	+34	+7	64.81	20.62	−33	+7
5	24.94	11.52	+16	+10	63.84	20.89	−43	+2
6	24.57	11.85	−5	+11	62.85	21.16	−44	−3
7	24.18	12.17	−26	+9	61.85	21.42	−37	−8
8	23.76	12.49	−41	+5	60.83	21.68	−23	−10
9	23.32	12.82	−47	0	59.79	21.94	−6	−10
10	22.86	13.14	−45	−5	58.74	22.19	+9	−8
11	22.38	13.46	−34	−8	57.67	22.44	+20	−5
12	21.88	13.78	−18	−10	56.59	22.69	+27	0
13	21.36	14.10	−1	−9	55.49	22.94	+27	+4
14	20.81	14.41	+13	−7	54.37	23.18	+22	+7
15	20.25	14.73	+23	−3	53.24	23.42	+13	+9
16	19.67	15.04	+28	+1	52.09	23.66	+1	+10
17	19.06	15.35	+26	+5	50.93	23.89	−11	+9
18	18.44	15.66	+19	+8	49.75	24.12	−20	+6
19	17.79	15.97	+9	+10	48.56	24.34	−27	+2
20	17.13	16.28	−3	+10	47.36	24.56	−28	−2
21	16.44	16.58	−14	+8	46.14	24.78	−22	−7
22	15.73	16.88	−23	+5	44.91	24.99	−10	−10
23	15.01	17.18	−27	0	43.67	25.20	+5	−10
24	14.26	17.48	−25	−4	42.41	25.41	+22	−10
25	13.50	17.78	−17	−8	41.14	25.61	+35	−7
26	12.71	18.07	−3	−11	39.85	25.81	+43	−2
27	11.90	18.36	+14	−11	38.56	26.01	+41	+4
28	11.08	18.65	+30	−9	37.25	26.20	+30	+8
29	10.24	18.94	+41	−5	35.92	26.39	+13	+11
30	9.38	19.23	+44	0	34.59	26.57	−6	+11
31	8.50	19.51	+40	+5	33.25	26.75	−26	+8
32	7.60	19.79	+25	+9	31.89	26.92	−39	+4

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+89° 1′ 50″	59.104	+59.096	+89° 2′ 0″	59.274	+59.266	+89° 2′ 20″	59.617	+59.608
60	59.274	+59.266	10	59.445	+59.437	30	59.790	+59.781

$\alpha_{1933.0} = 18^{h}\ 43^{m}\ 0^{s}.99$ $\delta_{1933.0} = +89^{\circ}\ 2'\ 15''.77$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Ni) λ Ursae minoris $6^{m}.55$

Tag	September AR.	September Dekl.	September ☾ Glieder		Oktober AR.	Oktober Dekl.	Oktober ☾ Glieder		November AR.	November Dekl.	November ☾ Glieder		Dezember AR.	Dezember Dekl.	Dezember ☾ Glieder	
		+	in			+	in			+	in			+	in	
	$18^{h}41^{m}$	$89^{\circ}\ 2'$	$0^{s}.01$	$0''.01$	$18^{h}41^{m}$	$89^{\circ}\ 2'$	$0^{s}.01$	$0''.01$	$18^{h}40^{m}$	$89^{\circ}\ 2'$	$0^{s}.01$	$0''.01$	$18^{h}40^{m}$	$89^{\circ}\ 2'$	$0^{s}.01$	$0''.01$
	s	"			s	"			s	"			s	"		
1	91.89	26.92	−39	+ 4	47.56	30.11	−32	− 8	60.48	28.79	+21	− 5	23.37	23.09	+25	+ 6
2	90.53	27.09	−43	− 1	46.01	30.14	−17	−10	59.05	28.67	+28	− 1	22.39	22.83	+17	+ 9
3	89.15	27.26	−39	− 6	44.46	30.17	0	−10	57.63	28.54	+29	+ 3	21.43	22.57	+ 6	+10
4	87.77	27.42	−27	− 9	42.91	30.19	+15	− 8	56.22	28.40	+24	+ 7	20.49	22.31	− 5	+ 9
5	86.38	27.58	−11	−10	41.36	30.21	+25	− 4	54.83	28.26	+15	+ 9	19.58	22.05	−15	+ 7
6	84.97	27.73	+ 5	− 9	39.80	30.22	+29	+ 1	53.44	28.12	+ 3	+10	18.68	21.78	−23	+ 4
7	83.56	27.88	+18	− 6	38.25	30.23	+28	+ 5	52.07	27.97	− 8	+ 9	17.81	21.51	−25	0
8	82.13	28.03	+26	− 2	36.69	30.23	+21	+ 8	50.70	27.82	−18	+ 6	16.95	21.23	−22	− 4
9	80.70	28.17	+29	+ 2	35.14	30.23	+11	+ 9	49.35	27.66	−24	+ 2	16.12	20.95	−13	− 8
10	79.26	28.31	+25	+ 6	33.59	30.22	− 1	+ 9	48.01	27.50	−24	− 2	15.31	20.67	+ 1	−10
11	77.81	28.44	+17	+ 9	32.04	30.21	−12	+ 8	46.69	27.33	−19	− 6	14.52	20.39	+17	−10
12	76.35	28.57	+ 6	+10	30.50	30.19	−21	+ 5	45.37	27.16	− 9	− 9	13.75	20.10	+33	− 9
13	74.88	28.69	− 6	+ 9	28.95	30.17	−25	+ 1	44.07	26.99	+ 6	−11	13.01	19.81	+43	− 5
14	73.41	28.81	−17	+ 7	27.41	30.14	−24	− 3	42.78	26.81	+22	−10	12.29	19.52	+46	+ 1
15	71.93	28.92	−24	+ 4	25.87	30.11	−18	− 7	41.51	26.62	+35	− 7	11.59	19.22	+40	+ 5
16	70.44	29.03	−27	− 1	24.33	30.07	− 6	−10	40.25	26.43	+43	− 3	10.92	18.92	+25	+ 9
17	68.95	29.13	−24	− 5	22.80	30.03	+10	−10	39.01	26.24	+42	+ 2	10.27	18.62	+ 4	+11
18	67.45	29.23	−15	− 9	21.27	29.98	+25	− 9	37.79	26.04	+32	+ 7	9.64	18.32	−17	+10
19	65.95	29.33	− 1	−11	19.74	29.93	+36	− 6	36.58	25.84	+14	+10	9.04	18.01	−35	+ 7
20	64.44	29.42	+15	−10	18.22	29.87	+41	0	35.38	25.63	− 7	+11	8.46	17.71	−46	+ 2
21	62.92	29.51	+29	− 8	16.70	29.81	+37	+ 5	34.20	25.42	−27	+ 9	7.91	17.40	−47	− 3
22	61.40	29.59	+39	− 3	15.19	29.74	+24	+ 9	33.04	25.21	−41	+ 5	7.38	17.08	−39	− 7
23	59.88	29.67	+41	+ 2	13.69	29.67	+ 5	+11	31.89	24.99	−48	0	6.88	16.77	−25	−10
24	58.35	29.74	+34	+ 7	12.19	29.59	−15	+11	30.76	24.77	−44	− 5	6.40	16.46	− 8	−10
25	56.82	29.81	+18	+10	10.70	29.51	−33	+ 8	29.65	24.54	−33	− 9	5.95	16.14	+ 9	− 8
26	55.28	29.87	− 1	+11	9.21	29.42	−44	+ 3	28.56	24.31	−17	−10	5.52	15.82	+20	− 4
27	53.74	29.93	−21	+ 9	7.74	29.33	−46	− 2	27.49	24.07	+ 1	−10	5.12	15.50	+26	0
28	52.20	29.98	−36	+ 6	6.27	29.23	−39	− 7	26.43	23.83	+15	− 7	4.74	15.18	+25	+ 4
29	50.66	30.03	−44	+ 1	4.81	29.13	−25	−10	25.39	23.59	+25	− 3	4.39	14.86	+19	+ 8
30	49.11	30.07	−42	− 4	3.36	29.02	− 8	−10	24.37	23.34	+28	+ 2	4.06	14.54	+ 9	+10
31	47.56	30.11	−32	− 8	1.91	28.91	+ 9	− 9	23.37	23.09	+25	+ 6	3.76	14.21	− 3	+10
32					0.48	28.79	+21	− 5					*) 3.49	13.89	−14	+ 8

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+89° 2′ 10″	59.445	+59.437	+89° 2′ 20″	59.617	+59.608	+89° 2′ 30″	59.790	+59.781
20	59.617	+59.608	30	59.790	+59.781	40	59.964	+59.955

$\alpha_{1933.0} = 18^{h}\ 43^{m}\ 0^{s}.99$ $\delta_{1933.0} = +89^{\circ}\ 2'\ 15''.77$

*) Tag der doppelten unteren Kulmination: Dez. 32

Nk) 76 Draconis $5^m.69$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder	Februar AR.	Februar Dekl.	Februar ☾ Glieder	März AR.	März Dekl.	März ☾ Glieder	April AR.	April Dekl.	April ☾ Glieder
	20^h47^m s	$+82°17'$ "	in 0.01s 0.01"	20^h47^m s	$+82°16'$ "	in 0.01s 0.01"	20^h47^m s	$+82°16'$ "	in 0.01s 0.01"	20^h47^m s	$+82°16'$ "	in 0.01s 0.01"
1	21.47	11.23	−5 −2	19.67	61.89	0 −8	20.60	53.09	+1 −7	24.08	46.27	+4 +5
2	21.37	10.97	−4 −6	*)19.66	61.56	+2 −6	20.68	52.81	+2 −4	24.22	46.13	+3 +7
3	21.27	10.70	−3 −8	19.65	61.24	+3 −2	20.76	52.53	+3 0	24.36	46.00	+2 +8
4	21.18	10.44	−1 −8	19.65	60.91	+4 +1	20.84	52.25	+4 +3	24.51	45.88	0 +7
5	21.08	10.17	0 −7	19.65	60.58	+4 +4	20.93	51.98	+4 +6	24.66	45.76	−1 +5
6	20.99	9.89	+2 −5	19.66	60.26	+3 +7	21.02	51.71	+3 +8	24.80	45.64	−3 +1
7	20.90	9.61	+3 −1	19.67	59.93	+2 +8	21.11	51.44	+1 +8	24.95	45.53	−3 −3
8	20.81	9.33	+4 +3	19.68	59.60	+1 +8	21.20	51.18	0 +7	25.11	45.43	−3 −7
9	20.73	9.04	+4 +6	19.69	59.28	−1 +6	21.29	50.92	−2 +4	25.26	45.34	−3 −11
10	20.65	8.75	+3 +8	19.70	58.95	−2 +3	21.38	50.67	−3 0	25.41	45.25	−1 −11
11	20.57	8.46	+2 +9	19.72	58.63	−3 −2	21.48	50.42	−4 −5	25.56	45.17	+1 −10
12	20.50	8.17	0 +8	19.74	58.31	−4 −6	21.58	50.18	−3 −8	25.72	45.09	+3 −6
13	20.43	7.87	−1 +5	19.77	57.98	−3 −10	21.69	49.94	−2 −11	25.87	45.02	+4 −1
14	20.36	7.58	−3 +1	19.80	57.66	−2 −11	21.80	49.70	−1 −11	26.03	44.95	+4 +5
15	20.30	7.28	−4 −4	19.83	57.34	0 −11	21.91	49.47	+1 −9	26.18	44.89	+3 +9
16	20.24	6.98	−3 −8	19.87	57.02	+2 −7	22.02	49.24	+3 −4	26.34	44.84	+2 +12
17	20.18	6.67	−2 −11	19.91	56.71	+4 −2	22.13	49.01	+4 +1	26.50	44.79	0 +12
18	20.12	6.36	−1 −12	19.95	56.40	+4 +3	22.25	48.79	+4 +6	26.66	44.75	−2 +9
19	20.07	6.05	+1 −10	20.00	56.09	+4 +8	22.37	48.57	+3 +10	26.82	44.72	−4 +5
20	20.02	5.73	+3 −6	20.05	55.78	+2 +11	22.49	48.36	+1 +12	26.98	44.69	−4 0
21	19.97	5.42	+4 0	20.10	55.47	0 +11	22.61	48.16	−1 +11	27.14	44.67	−4 −4
22	19.93	5.11	+4 +5	20.15	55.17	−1 +10	22.74	47.96	−3 +7	27.30	44.66	−4 −7
23	19.89	4.79	+3 +9	20.21	54.86	−3 +6	22.86	47.77	−4 +3	27.46	44.65	−2 −9
24	19.85	4.47	+2 +11	20.27	54.56	−4 +1	22.99	47.58	−4 −2	27.62	44.64	0 −8
25	19.82	4.15	0 +11	20.33	54.26	−4 −4	23.12	47.40	−4 −6	27.78	44.64	+1 −6
26	19.79	3.83	−2 +9	20.39	53.96	−4 −7	23.25	47.22	−3 −8	27.94	44.65	+3 −3
27	19.76	3.51	−4 +4	20.46	53.67	−2 −9	23.38	47.05	−1 −9	28.10	44.67	+4 +1
28	19.74	3.19	−5 −1	20.53	53.38	−1 −8	23.52	46.88	0 −8	28.26	44.69	+4 +4
29	19.72	2.87	−4 −5	20.60	53.09	+1 −7	23.66	46.72	+2 −5	28.42	44.72	+3 +7
30	19.70	2.54	−3 −7				23.79	46.56	+3 −1	28.58	44.75	+2 +8
31	19.68	2.22	−2 −8				23.93	46.41	+4 +2	28.74	44.79	+1 +8
32	19.67	1.89	0 −8				24.08	46.27	+4 +5			

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+82° 16′ 40″	7.442	+ 7.375	+82° 16′ 50″	7.445	+ 7.377	+82° 17′ 10″	7.450	+ 7.383
50	7.445	+ 7.377	60	7.447	+ 7.380	20	7.453	+ 7.385

$\alpha_{1933.0} = 20^h\ 47^m\ 33^s.24$ $\delta_{1933.0} = +82°\ 17'\ 5''.12$

*) Tag der doppelten unteren Kulmination: Febr. 2

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Nk) 76 Draconis $5^m.69$

Tag	Mai				Juni				Juli				August			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	20^h47^m	+82° 16′	in $0^s.01$	in $0''.01$	20^h47^m	+82° 16′	in $0^s.01$	in $0''.01$	20^h47^m	+82° 16′	in $0^s.01$	in $0''.01$	20^h47^m	+82° 17′	in $0^s.01$	in $0''.01$
	s	″			s	″			s	″			s	″		
1	28.74	44.79	+1	+8	33.35	48.96	−3	−5	36.37	57.32	−1	−12	37.19	8.32	+4	0
2	28.90	44.84	0	+6	33.48	49.18	−3	−9	36.44	57.65	+1	−11	37.17	8.69	+4	+5
3	29.06	44.90	−2	+2	33.61	49.40	−2	−11	36.50	57.98	+3	−8	{37.15 37.13	9.06 9.43	+3 +1	+9} +11
4	29.22	44.96	−3	−2	33.74	49.63	0	−12	36.56	58.32	+4	−3	37.11	9.80	−1	+10
5	29.38	45.02	−3	−6	33.86	49.87	+1	−10	36.62	58.66	+4	+2	37.08	10.16	−3	+7
6	29.53	45.09	−3	−10	33.98	50.11	+3	−6	36.67	59.00	+4	+7	37.05	10.53	−4	+2
7	29.69	45.17	−2	−12	34.10	50.35	+4	−1	36.72	59.34	+3	+10	37.02	10.89	−5	−2
8	29.85	45.25	0	−11	34.22	50.60	+4	+5	36.77	59.68	+1	+11	36.99	11.26	−4	−6
9	30.01	45.34	+2	−8	34.34	50.85	+3	+9	36.82	60.03	−2	+10	36.95	11.63	−3	−8
10	30.17	45.43	+3	−3	34.45	51.10	+2	+12	36.87	60.37	−3	+6	36.91	11.99	−1	−8
11	30.33	45.53	+4	+2	34.56	51.36	−1	+11	36.91	60.72	−5	+1	36.87	12.35	+1	−7
12	30.48	45.64	+4	+7	34.67	51.63	−3	+9	36.95	61.07	−5	−3	36.83	12.71	+2	−4
13	30.63	45.76	+3	+11	34.78	51.90	−4	+5	36.99	61.42	−4	−6	36.78	13.07	+3	0
14	30.79	45.88	+1	+12	34.89	52.17	−5	0	37.02	61.78	−3	−8	36.73	13.43	+4	+3
15	30.94	46.00	−1	+11	35.00	52.44	−5	−4	37.05	62.13	−1	−8	36.68	13.79	+3	+7
16	31.09	46.13	−3	+7	35.10	52.72	−4	−7	37.08	62.49	+1	−6	36.63	14.15	+3	+8
17	31.24	46.27	−4	+3	35.20	53.01	−2	−8	37.11	62.85	+2	−3	36.57	14.51	+2	+9
18	31.39	46.41	−5	−2	35.30	53.30	0	−7	37.14	63.21	+3	+1	36.51	14.87	0	+8
19	31.54	46.56	−4	−6	35.39	53.59	+2	−5	37.16	63.57	+4	+5	36.45	15.22	−1	+5
20	31.68	46.71	−3	−8	35.48	53.88	+3	−1	37.18	63.93	+3	+7	36.38	15.57	−3	+1
21	31.83	46.87	−1	−8	35.57	54.18	+4	+2	37.19	64.29	+2	+9	36.32	15.92	−3	−3
22	31.98	47.04	+1	−6	35.66	54.48	+4	+5	37.20	64.65	+1	+8	36.25	16.27	−3	−7
23	32.12	47.21	+2	−4	35.75	54.78	+3	+7	37.21	65.01	0	+7	36.18	16.62	−2	−10
24	32.26	47.38	+3	0	35.84	55.09	+2	+9	37.22	65.38	−2	+4	36.10	16.97	−1	−11
25	32.40	47.56	+4	+3	35.92	55.40	+1	+8	37.23	65.75	−3	0	36.02	17.31	+1	−10
26	32.54	47.75	+4	+6	36.00	55.71	−1	+5	37.23	66.11	−3	−5	35.94	17.65	+3	−7
27	32.68	47.94	+3	+8	36.08	56.03	−2	+2	37.23	66.48	−3	−9	35.86	17.99	+4	−2
28	32.82	48.13	+1	+8	36.16	56.35	−3	−3	37.23	66.84	−2	−11	35.77	18.33	+4	+3
29	32.96	48.33	0	+7	36.23	56.67	−3	−7	37.22	67.21	0	−12	35.68	18.66	+3	+8
30	33.09	48.53	−1	+4	36.30	56.99	−3	−10	37.21	67.58	+2	−11	35.59	19.00	+2	+10
31	33.22	48.74	−3	0	36.37	57.32	−1	−12	37.20	67.95	+3	−6	35.50	19.33	0	+11
32	33.35	48.96	−3	−5					37.19	68.32	+4	0	35.41	19.66	−2	+8

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+82° 16′ 40″	7.442	+ 7.375	+82° 16′ 50″	7.445	+ 7.377	+82° 17′ 10″	7.450	+ 7.383
50	7.445	+ 7.377	60	7.447	+ 7.380	20	7.453	+ 7.385

$\alpha_{1933.0} = 20^h\ 47^m\ 33^s.24$ $\delta_{1933.0} = +82°\ 17'\ 5''.12$

Nk) 76 Draconis $5^m.69$

Tag	September				Oktober				November				Dezember			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	20^h47^m	+ $82°17'$	in $0^s.01$	in $0''.01$	20^h47^m	+ $82°17'$	in $0^s.01$	in $0''.01$	20^h47^m	+ $82°17'$	in $0^s.01$	in $0''.01$	20^h47^m	+ $82°17'$	in $0^s.01$	in $0''.01$
	s	"			s	"			s	"			s	"		
1	35.41	19.66	−2	+ 8	31.70	28.18	−5	− 3	26.56	33.02	0	− 7	21.42	32.69	+3	+ 2
2	35.32	19.99	−3	+ 4	31.55	28.41	−4	− 7	26.38	33.09	+2	− 4	21.26	32.59	+3	+ 5
3	35.22	20.32	−4	0	31.40	28.63	−3	− 8	26.21	33.16	+3	− 1	21.10	32.48	+3	+ 8
4	35.12	20.64	−4	− 5	31.24	28.85	−1	− 8	26.03	33.22	+4	+ 3	20.94	32.37	+2	+ 9
5	35.02	20.96	−4	− 8	31.08	29.06	+1	− 6	25.86	33.28	+3	+ 6	20.78	32.25	+1	+ 8
6	34.91	21.28	−2	− 9	30.93	29.27	+1	− 3	25.68	33.33	+3	+ 8	20.63	32.13	−1	+ 6
7	34.81	21.59	0	− 8	30.77	29.48	+2	+ 1	25.51	33.37	+2	+ 9	20.47	32.00	−2	+ 3
8	34.70	21.90	+1	− 5	30.61	29.68	+4	+ 4	25.33	33.41	0	+ 7	20.32	31.86	−3	− 1
9	34.59	22.21	+3	− 2	30.45	29.88	+3	+ 7	25.16	33.44	−1	+ 5	20.17	31.72	−3	− 6
10	34.48	22.52	+3	+ 2	30.29	30.07	+2	+ 8	24.98	33.47	−2	+ 1	20.02	31.57	−3	− 9
11	34.36	22.83	+4	+ 5	30.13	30.26	+1	+ 8	24.81	33.49	−3	− 3	19.88	31.42	−2	−12
12	34.25	23.13	+3	+ 8	29.97	30.44	0	+ 7	24.63	33.50	−3	− 7	19.73	31.26	0	−12
13	34.13	23.43	+2	+ 9	29.80	30.62	−2	+ 4	24.46	33.51	−2	−10	19.59	31.10	+2	−10
14	34.01	23.72	+1	+ 8	29.64	30.79	−3	0	24.29	33.51	−1	−12	19.45	30.93	+3	− 6
15	33.89	24.01	−1	+ 6	29.47	30.96	−3	− 4	24.12	33.51	+1	−11	19.31	30.76	+4	0
16	33.77	24.30	−2	+ 3	29.30	31.12	−3	− 8	23.94	33.50	+2	− 8	19.17	30.58	+4	+ 5
17	33.64	24.58	−3	− 1	29.14	31.28	−2	−11	23.77	33.49	+4	− 3	19.04	30.40	+3	+ 9
18	33.51	24.86	−4	− 6	28.97	31.43	−1	−11	23.60	33.47	+4	+ 2	18.91	30.21	+1	+11
19	33.38	25.14	−3	− 9	28.80	31.58	+1	−10	23.42	33.45	+4	+ 7	18.78	30.02	−1	+11
20	33.25	25.42	−2	−11	28.63	31.72	+3	− 6	23.25	33.42	+3	+11	18.65	29.82	−3	+ 8
21	33.12	25.69	0	−11	28.46	31.86	+4	− 1	23.08	33.38	0	+11	18.52	29.61	−4	+ 3
22	32.99	25.96	+2	− 8	28.29	31.99	+4	+ 5	22.91	33.34	−2	+10	18.39	29.40	−5	− 2
23	32.85	26.22	+3	− 4	28.12	32.12	+3	+ 9	22.74	33.29	−3	+ 6	18.27	29.19	−4	− 6
24	32.71	26.48	+4	+ 1	27.95	32.24	+2	+11	22.57	33.24	−4	+ 1	18.15	28.97	−3	− 8
25	32.57	26.74	+4	+ 7	27.77	32.35	0	+11	22.40	33.18	−5	− 3	18.03	28.75	−1	− 8
26	32.43	26.99	+3	+10	27.60	32.46	−2	+ 8	22.23	33.11	−4	− 7	17.91	28.52	0	− 6
27	32.29	27.24	+1	+11	27.42	32.57	−4	+ 4	22.07	33.04	−2	− 8	17.80	28.29	+2	− 3
28	32.15	27.48	−1	+10	27.25	32.67	−5	− 1	21.91	32.96	−1	− 8	17.69	28.06	+3	+ 1
29	32.00	27.72	−3	+ 6	27.08	32.76	−4	− 5	21.74	32.88	+1	− 5	17.58	27.82	+4	+ 4
30	31.85	27.95	−4	+ 2	26.90	32.85	−3	− 8	21.58	32.79	+3	− 2	17.47	27.58	+3	+ 7
31	31.70	28.18	−5	− 3	26.73	32.94	−2	− 9	21.42	32.69	+3	+ 2	17.37	27.33	+2	+ 9
32					26.56	33.02	0	− 7					17.27	27.08	+1	+ 9

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
+82° 17′ 10″	7.450	+ 7.383	+82° 17′ 20″	7.453	+ 7.385	+82° 17′ 30″	7.455	+ 7.388
20	7.453	+ 7.385	30	7.455	+ 7.388	40	7.458	+ 7.391

$\alpha_{1933.0} = 20^h\ 47^m\ 33^s.24$ $\delta_{1933.0} = +82°\ 17'\ 5''.12$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sa) Octantis 4 G. $5^{m}.63$

Tag	Januar			Februar			März			April		
	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder
	1^h41^m s	−85° 6′ ″	in 0.01 s, 0.01 ″	1^h40^m s	−85° 6′ ″	in 0.01 s, 0.01 ″	1^h40^m s	−85° 6′ ″	in 0.01 s, 0.01 ″	1^h40^m s	−85° 6′ ″	in 0.01 s, 0.01 ″
1	13.61	45.05	+6 +10	65.37	42.59	+4 − 5	59.03	35.89	+2 − 7	54.66	25.22	−7 − 7
2	13.34	45.06	+7 + 7	65.11	42.42	+1 − 7	58.84	35.59	−1 − 9	54.58	24.84	−7 − 4
3	13.07	45.06	+7 + 2	64.86	42.24	−2 − 9	58.65	35.28	−4 − 9	54.50	24.46	−6 0
4	12.80	45.06	+5 − 2	64.61	42.06	−4 − 9	58.47	34.97	−6 − 8	54.42	24.08	−4 + 3
5	12.53	45.06	+3 − 6	64.36	41.87	−6 − 7	58.29	34.66	−7 − 5	54.35	23.70	−1 + 6
6	12.26	45.05	0 − 8	64.11	41.68	−7 − 5	58.11	34.34	−7 − 2	54.28	23.32	+2 + 7
7	11.99	45.03	−3 − 9	63.86	41.48	−6 − 1	57.93	34.02	−5 + 2	54.22	22.94	+6 + 6
8	11.72	45.01	−5 − 8	63.62	41.27	−5 + 3	57.76	33.70	−3 + 5	54.16	22.56	+8 + 4
9	11.45	44.98	−7 − 6	63.38	41.06	−2 + 6	57.59	33.38	0 + 7	54.10	22.18	+8 0
10	11.18	44.95	−7 − 3	63.14	40.85	+2 + 8	57.42	33.05	+4 + 8	54.05	21.79	+7 − 4
11	10.91	44.91	−6 + 1	62.90	40.63	+5 + 8	57.26	32.72	+6 + 6	54.00	21.41	+4 − 8
12	10.64	44.86	−4 + 4	62.66	40.40	+7 + 5	57.10	32.38	+8 + 3	53.96	21.03	0 −10
13	10.37	44.80	−1 + 7	62.43	40.17	+8 + 1	56.94	32.04	+8 − 1	53.92	20.65	−4 −10
14	10.10	44.74	+3 + 8	62.20	39.94	+7 − 3	56.79	31.70	+6 − 6	53.88	20.26	−7 − 7
15	9.84	44.67	+6 + 7	61.97	39.70	+5 − 7	56.64	31.36	+3 − 9	53.85	19.88	−8 − 2
16	9.57	44.60	+8 + 3	61.74	39.45	+1 −10	56.50	31.02	−1 −10	53.82	19.49	−8 + 3
17	9.30	44.52	+8 − 1	61.52	39.20	−3 −11	56.36	30.67	−5 − 9	*)53.80	19.11	−6 + 8
18	9.03	44.43	+7 − 6	61.30	38.95	−6 − 8	56.22	30.32	−8 − 6	53.78	18.73	−2 +11
19	8.76	44.34	+3 − 9	61.08	38.69	−8 − 4	56.08	29.97	−8 − 1	53.76	18.35	+1 +13
20	8.49	44.24	−1 −11	60.86	38.43	−8 + 1	55.95	29.61	−7 + 4	53.75	17.96	+5 +11
21	8.23	44.13	−4 −10	60.64	38.16	−6 + 6	55.82	29.26	−4 + 9	53.74	17.58	+7 + 8
22	7.96	44.02	−7 − 7	60.43	37.89	−3 +10	55.70	28.90	−1 +12	53.73	17.20	+7 + 4
23	7.70	43.90	−8 − 2	60.22	37.62	+1 +12	55.58	28.54	+3 +12	53.73	16.81	+6 0
24	7.43	43.78	−7 + 3	60.01	37.34	+4 +11	55.46	28.18	+6 +10	53.73	16.43	+4 − 4
25	7.17	43.65	−5 + 8	59.81	37.06	+6 + 9	55.35	27.81	+7 + 7	53.74	16.05	+1 − 7
26	6.91	43.52	−2 +11	59.61	36.77	+7 + 5	55.24	27.45	+7 + 2	53.75	15.67	−2 − 9
27	6.65	43.38	+2 +12	59.41	36.48	+7 + 1	55.13	27.08	+6 − 2	53.77	15.29	−4 − 9
28	6.39	43.23	+5 +11	59.22	36.19	+5 − 3	55.03	26.71	+3 − 6	53.79	14.91	−6 − 7
29	6.13	43.08	+7 + 8	59.03	35.89	+2 − 7	54.93	26.34	0 − 8	53.81	14.54	−7 − 5
30	5.87	42.92	+7 + 4				54.84	25.96	−3 − 9	53.84	14.16	−7 − 1
31	5.62	42.76	+6 − 1				54.75	25.59	−5 − 8	53.87	13.78	−5 + 2
32	5.37	42.59	+4 − 5				54.66	25.22	−7 − 7			

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−85° 6′ 10″	11.714	−11.671	−85° 6′ 20″	11.721	−11.678	−85° 6′ 40″	11.734	−11.691
20	11.721	−11.678	30	11.727	−11.684	50	11.740	−11.698

$\alpha_{1933.0} = 1^h\ 41^m\ 4^s.13$ $\delta_{1933.0} = -85°\ 6'\ 30''.97$

*) Tag der doppelten unteren Kulmination: April 17

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sa) Octantis 4 G. $5^{m}.63$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder		Juni AR.	Juni Dekl.	Juni ☾ Glieder		Juli AR.	Juli Dekl.	Juli ☾ Glieder		August AR.	August Dekl.	August ☾ Glieder	
	$1^h 40^m$	$-85° 6'$	in 0.01^s	in $0.01''$	$1^h 40^m$	$-85° 5'$	in 0.01^s	in $0.01''$	$1^h 41^m$	$-85° 5'$	in 0.01^s	in $0.01''$	$1^h 41^m$	$-85° 5'$	in 0.01^s	in $0.01''$
	s	″			s	″			s	″			s	″		
1	53.87	13.78	−5	+2	56.72	63.16	+6	+5	2.37	56.11	+8	−5	9.75	53.76	−5	−11
2	53.90	13.41	−2	+5	56.87	62.86	+8	+2	2.60	55.95	+5	−9	9.99	53.78	−7	−7
3	53.94	13.04	+1	+7	57.02	62.57	+8	−2	2.82	55.80	+1	−11	10.23	53.80	−8	−2
4	53.98	12.67	+5	+7	57.18	62.28	+7	−6	3.05	55.65	−3	−12	10.47	53.83	−7	+3
5	54.03	12.30	+7	+5	57.34	61.99	+4	−10	3.28	55.50	−6	−9	10.71	53.87	−4	+8
6	54.08	11.93	+8	+1	57.50	61.71	0	−11	3.51	55.36	−8	−5	10.95	53.91	−1	+11
7	54.14	11.56	+8	−3	57.66	61.43	−4	−10	3.74	55.23	−8	+1	11.18	53.96	+3	+12
8	54.20	11.19	+5	−7	57.83	61.16	−7	−7	3.97	55.10	−6	+6	11.42	54.01	+6	+10
9	54.26	10.83	+2	−10	58.00	60.89	−8	−2	4.21	54.98	−3	+10	11.66	54.07	+7	+7
10	54.33	10.47	−2	−11	58.17	60.63	−8	+4	4.44	54.86	+1	+12	11.89	54.14	+7	+3
11	54.40	10.11	−6	−9	58.35	60.37	−5	+9	4.68	54.75	+4	+12	12.12	54.21	+5	−2
12	54.48	9.76	−8	−5	58.52	60.11	−2	+12	4.91	54.64	+6	+10	12.35	54.29	+3	−5
13	54.56	9.40	−8	+1	58.70	59.86	+2	+13	5.15	54.54	+7	+6	12.58	54.37	0	−7
14	54.64	9.05	−7	+6	58.88	59.61	+5	+12	5.39	54.45	+6	+1	12.81	54.46	−3	−8
15	54.72	8.70	−4	+10	59.07	59.37	+7	+8	5.63	54.36	+4	−3	13.04	54.55	−6	−7
16	54.81	8.35	0	+13	59.26	59.13	+7	+4	5.87	54.28	+1	−6	13.27	54.65	−7	−5
17	54.90	8.00	+3	+13	59.45	58.89	+6	−1	6.11	54.20	−2	−8	13.49	54.76	−7	−2
18	55.00	7.66	+6	+10	59.64	58.66	+3	−4	6.35	54.13	−4	−8	13.71	54.87	−6	+2
19	55.10	7.32	+7	+6	59.84	58.43	+1	−7	6.59	54.07	−6	−6	13.93	54.99	−4	+5
20	55.20	6.98	+7	+2	60.04	58.21	−2	−8	6.83	54.01	−7	−4	14.14	55.11	−1	+7
21	55.31	6.64	+5	−2	60.24	57.99	−5	−8	7.08	53.96	−7	−1	14.36	55.24	+2	+8
22	55.42	6.31	+2	−6	60.44	57.78	−7	−6	7.32	53.91	−5	+3	14.57	55.37	+6	+7
23	55.54	5.98	−1	−8	60.64	57.57	−7	−3	7.56	53.87	−3	+6	14.78	55.51	+7	+4
24	55.66	5.65	−3	−9	60.85	57.37	−6	0	7.81	53.83	0	+7	14.99	55.65	+8	0
25	55.78	5.33	−6	−8	61.06	57.18	−4	+4	8.05	53.80	+4	+7	15.20	55.80	+7	−5
26	55.90	5.01	−7	−5	61.28	56.99	−1	+6	8.29	53.78	+7	+6	15.40	55.95	+4	−9
27	56.03	4.69	−7	−2	61.49	56.80	+2	+7	8.53	53.76	+8	+2	15.60	56.11	+1	−11
28	56.16	4.38	−6	+1	61.71	56.62	+5	+6	8.77	53.75	+8	−2	15.80	56.28	−3	−11
29	56.29	4.07	−3	+4	61.93	56.45	+7	+4	9.02	53.75	+6	−7	16.00	56.45	−6	−9
30	56.43	3.76	0	+6	62.15	56.28	+8	0	9.26	53.75	+3	−11	16.20	56.62	−8	−4
31	56.57	3.46	+3	+7	62.37	56.11	+8	−5	9.50	53.75	−1	−12	16.39	56.80	−8	+1
32	56.72	3.16	+6	+5					9.75	53.76	−5	−11	16.58	56.99	−5	+6

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−85° 5′ 50″	11.701	−11.658	−85° 6′ 0″	11.707	−11.665	−85° 6′ 10″	11.714	−11.671
60	11.707	−11.665	10	11.714	−11.671	20	11.721	−11.678

$\alpha_{1933.0} = 1^h\ 41^m\ 4^s.13$ $\delta_{1933.0} = -85°\ 6'\ 30''.97$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sa) Octantis 4 G. $5^m.63$

Tag	September				Oktober				November				Dezember			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	1^h41^m	$-85°5'$	in 0.01^s	in $0.01''$	1^h41^m	$-85°6'$	in 0.01^s	in $0.01''$	1^h41^m	$-85°6'$	in 0.01^s	in $0.01''$	1^h41^m	$-85°6'$	in 0.01^s	in $0.01''$
	s	"			s	"			s	"			s	"		
1	16.58	56.99	−5	+6	20.60	4.45	+4	+11	20.49	14.41	+3	−5	16.16	22.20	−5	−7
2	16.77	57.18	−2	+10	20.67	4.75	+6	+9	20.41	14.71	0	−8	15.96	22.40	−7	−6
3	16.95	57.37	+2	+12	20.74	5.05	+7	+5	20.32	15.01	−3	−8	15.75	22.59	−7	−3
4	17.13	57.57	+5	+11	20.80	5.36	+7	+1	20.23	15.31	−5	−7	15.54	22.78	−7	0
5	17.31	57.77	+7	+8	20.86	5.67	+5	−3	20.13	15.61	−7	−5	15.33	22.96	−5	+3
6	17.48	57.98	+7	+4	20.91	5.97	+2	−6	20.03	15.91	−7	−2	15.11	23.13	−2	+5
7	17.65	58.19	+6	0	20.96	6.28	−1	−8	19.93	16.20	−6	+1	14.89	23.30	+1	+7
8	17.82	58.41	+4	−4	21.00	6.59	−4	−8	19.82	16.49	−4	+4	14.67	23.47	+4	+7
9	17.98	58.63	+1	−7	21.04	6.90	−6	−7	19.71	16.78	−1	+6	14.45	23.63	+7	+4
10	18.14	58.86	−2	−8	21.07	7.21	−7	−4	19.59	17.06	+2	+7	14.22	23.78	+8	+1
11	18.30	59.09	−5	−8	21.10	7.52	−7	−1	19.47	17.34	+5	+6	13.99	23.93	+8	−3
12	18.45	59.33	−7	−6	21.12	7.83	−5	+2	19.34	17.62	+7	+4	13.76	24.08	+6	−7
13	18.60	59.57	−7	−3	21.14	8.15	−3	+5	19.21	17.90	+8	0	13.53	24.22	+3	−11
14	18.74	59.81	−6	0	21.15	8.46	0	+7	19.08	18.17	+7	−4	13.29	24.35	−1	−12
15	18.88	60.06	−5	+3	21.16	8.78	+3	+7	18.94	18.44	+5	−8	13.04	24.48	−4	−11
16	19.02	60.31	−2	+6	21.16	9.09	+6	+6	18.79	18.70	+1	−11	12.80	24.60	−7	−7
17	19.16	60.56	+1	+7	21.16 21.16	9.41 9.73	+8 +8	+3 −1	18.64	18.96	−3	−11	12.56	24.71	−8	−2
18	19.29	60.82	+4	+7	21.15	10.04	+6	−5	18.49	19.22	−6	−9	12.31	24.82	−7	+4
19	19.42	61.08	+7	+5	21.13	10.36	+3	−9	18.34	19.47	−8	−5	12.06	24.92	−4	+9
20	19.54	61.35	+8	+2	21.11	10.68	0	−11	18.18	19.72	−8	+1	11.82	25.02	−1	+12
21	19.66	61.62	+8	−2	21.09	10.99	−4	−10	18.01	19.97	−6	+6	11.57	25.11	+3	+13
22	19.77	61.89	+5	−7	21.06	11.31	−7	−7	17.84	20.21	−3	+11	11.31	25.20	+6	+11
23	19.88	62.16	+2	−10	21.02	11.62	−8	−2	17.67	20.45	+1	+12	11.05	25.28	+7	+7
24	19.98	62.44	−2	−11	20.98	11.94	−7	+3	17.49	20.68	+4	+12	10.80	25.35	+7	+3
25	20.08	62.72	−5	−9	20.93	12.25	−5	+8	17.31	20.91	+7	+10	10.54	25.42	+5	−2
26	20.18	63.00	−8	−6	20.88	12.56	−1	+11	17.13	21.14	+7	+5	10.28	25.48	+2	−5
27	20.27	63.29	−8	−1	20.83	12.87	+2	+12	16.94	21.36	+7	0	10.02	25.54	−1	−7
28	20.36	63.58	−7	+5	20.77	13.18	+5	+11	16.75	21.58	+4	−3	9.76	25.59	−4	−7
29	20.44	63.87	−3	+9	20.71	13.49	+7	+7	16.56	21.79	+1	−6	9.50	25.63	−6	−6
30	20.52	64.16	0	+11	20.64	13.79	+7	+3	16.36	22.00	−2	−8	9.24	25.66	−7	−4
31	20.60	64.45	+4	+11	20.57	14.10	+6	−1	16.16	22.20	−5	−7	8.97	25.69	−7	−1
32					20.49	14.41	+3	−5					8.71	25.71	−6	+2

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−85° 5′ 50″	11.701	−11.658	−85° 6′ 0″	11.707	−11.665	−85° 6′ 20″	11.721	−11.678
60	11.707	−11.665	10	11.714	−11.671	30	11.727	−11.684

$\alpha_{1933.0} = 1^h\ 41^m\ 4^s.13$ $\delta_{1933.0} = -85°\ 6'\ 30''.97$

Sb) ξ Mensae $5^{m}.85$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder		Februar AR.	Februar Dekl.	Februar ☾ Glieder		März AR.	März Dekl.	März ☾ Glieder		April AR.	April Dekl.	April ☾ Glieder	
	$5^{h}6^{m}$	— $82°33'$	in 0.01^{s}	in $0.01''$	$5^{h}6^{m}$	— $82°33'$	in 0.01^{s}	in $0.01''$	$5^{h}6^{m}$	— $82°33'$	in 0.01^{s}	in $0.01''$	$5^{h}6^{m}$	— $82°33'$	in 0.01^{s}	in $0.01''$
	s	"			s	"			s	"			s	"		
1	35.51	46.25	−1	+11	31.21	53.47	+3	+1	25.95	55.95	+3	−1	19.98	53.85	0	−10
2	35.41	46.54	+1	+11	31.04	53.63	+3	−3	25.75	55.96	+2	−5	19.80	53.70	−2	−9
3	35.31	46.83	+2	+8	30.86	53.79	+2	−7	25.55	55.96	+1	−8	19.62	53.55	−2	−6
4	35.20	47.11	+3	+4	30.69	53.94	+1	−9	25.35	55.96	0	−10	19.44	53.39	−2	−2
5	35.09	47.39	+3	0	30.51	54.08	0	−10	25.16	55.96	−1	−10	19.26	53.23	−2	+2
6	34.98	47.67	+2	−4	30.33	54.22	−1	−9	24.96	55.95	−2	−8	19.09	53.07	−1	+7
7	34.86	47.94	+2	−8	30.15	54.35	−2	−7	24.77	55.93	−2	−5	18.91	52.90	0	+9
8	34.74	48.21	0	−10	29.97	54.48	−3	−3	24.57	55.91	−3	0	18.73	52.73	+2	+10
9	34.62	48.48	−1	−10	29.79	54.60	−3	+1	24.37	55.88	−2	+4	18.56	52.55	+3	+9
10	34.50	48.74	−2	−9	29.60	54.72	−2	+6	24.18	55.85	−1	+8	18.39	52.37	+4	+5
11	34.38	49.00	−2	−6	29.42	54.83	0	+9	23.98	55.81	+1	+10	18.22	52.18	+4	0
12	34.25	49.26	−3	−1	29.23	54.94	+1	+10	23.78	55.77	+2	+10	18.06	51.99	+3	−5
13	34.12	49.51	−2	+3	29.05	55.04	+3	+9	23.59	55.72	+3	+8	17.89	51.79	+1	−9
14	33.99	49.76	−1	+7	28.86	55.14	+4	+6	23.39	55.67	+4	+3	17.73	51.59	−1	−11
15	33.85	50.01	0	+10	28.67	55.23	+4	+1	23.19	55.61	+4	−2	17.57	51.39	−2	−11
16	33.71	50.25	+2	+10	28.48	55.32	+3	−4	23.00	55.55	+2	−7	17.41	51.18	−4	−7
17	33.57	50.49	+3	+8	28.29	55.40	+2	−9	22.80	55.48	+1	−10	17.25	50.97	−4	−2
18	33.43	50.72	+4	+4	28.09	55.47	0	−11	22.61	55.41	−1	−11	17.09	50.75	−4	+3
19	33.28	50.95	+4	−1	27.90	55.54	−2	−12	22.42	55.33	−3	−9	16.94	50.53	−3	+8
20	33.13	51.17	+3	−6	27.71	55.61	−3	−8	22.22	55.25	−4	−5	16.79	50.31	−2	+11
21	32.98	51.39	+1	−10	27.51	55.67	−4	−3	22.03	55.16	−4	0	16.64	50.08	0	+11
22	32.83	51.60	−1	−11	27.32	55.72	−4	+2	21.84	55.06	−4	+5	16.49	49.85	+1	+10
23	32.67	51.81	−2	−10	27.13	55.77	−3	+7	21.65	54.96	−3	+9	16.34	49.61	+2	+6
24	32.52	52.01	−4	−6	26.93	55.82	−2	+10	21.46	54.86	−1	+11	16.19	49.37	+3	+2
25	32.36	52.21	−4	−1	26.74	55.86	0	+11	21.27	54.75	+1	+11	16.05	49.13	+3	−2
26	32.20	52.41	−4	+4	26.54	55.89	+1	+10	21.08	54.63	+2	+9	15.91	48.89	+2	−6
27	32.04	52.60	−3	+8	26.34	55.91	+2	+7	20.90	54.51	+3	+5	15.77	48.64	+1	−9
28	31.88	52.78	−1	+11	26.14	55.93	+3	+3	20.71	54.39	+3	0	15.63	48.39	0	−10
29	31.71	52.96	0	+11	25.95	55.95	+3	−1	20.53	54.26	+3	−4	15.50	48.14	−1	−10
30	31.55	53.14	+2	+9					20.34	54.13	+2	−7	15.37	47.88	−2	−7
31	31.38	53.31	+3	+6					20.16	53.99	+1	−9	15.24	47.62	−2	−4
32	31.21	53.47	+3	+1					19.98	53.85	0	−10				

δ	sec δ	tg δ	δ	sec δ	tg δ
−82° 33′ 40″	7.724	− 7.659	−82° 33′ 50″	7.727	− 7.662
50	7.727	− 7.662	60	7.730	− 7.665

$\alpha_{1933.0} = 5^{h}\ 6^{m}\ 25^{s}.76$ $\delta_{1933.0} = -82°\ 33'\ 46''.39$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

8b) ξ Mensae $5^m.85$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder	Juni AR.	Juni Dekl.	Juni ☾ Glieder	Juli AR.	Juli Dekl.	Juli ☾ Glieder	August AR.	August Dekl.	August ☾ Glieder
	$5^h 6^m$ s	— 82° 33′ "	in 0.01s 0.01"	$5^h 6^m$ s	— 82° 33′ "	in 0.01s 0.01"	$5^h 6^m$ s	— 82° 33′ "	in 0.01s 0.01"	$5^h 6^m$ s	— 82° 33′ "	in 0.01s 0.01"
1	15.24	47.62	−2 −4	12.46	38.23	+1 +9	12.31	28.28	+4 +5	14.76	19.57	+1 −11
2	15.12	47.35	−2 +1	12.41	37.90	+2 +10	12.35	27.96	+4 0	14.87	19.34	−1 −11
3	14.99	47.08	−1 +5	12.36	37.57	+4 +8	12.39	27.64	+4 −5	14.99	19.12	−3 −9
4	14.87	46.81	0 +8	12.32	37.24	+4 +4	12.43	27.32	+2 −9	15.11	18.90	−4 −5
5	14.75	46.53	+1 +10	12.28	36.91	+4 −1	12.48	27.01	0 −11	15.23	18.69	−4 0
6	14.63	46.25	+3 +9	12.25	36.57	+3 −6	12.53	26.70	−2 −11	15.35	18.48	−4 +5
7	14.51	45.97	+4 +6	12.22	36.23	+1 −10	12.58	26.39	−3 −8	15.48	18.28	−2 +9
8	14.39	45.69	+4 +2	*)12.19	35.90	−1 −11	12.64	26.08	−4 −3	15.61	18.08	−1 +11
9	14.28	45.40	+4 −3	12.16	35.56	−3 −10	12.70	25.77	−4 +2	15.74	17.89	+1 +11
10	14.17	45.11	+2 −8	12.14	35.23	−4 −6	12.76	25.47	−3 +7	15.87	17.70	+2 +8
11	14.07	44.82	0 −10	12.12	34.89	−4 −1	12.83	25.17	−2 +11	16.01	17.51	+2 +5
12	13.97	44.53	−2 −11	12.10	34.56	−4 +5	12.89	24.87	0 +12	16.14	17.33	+3 0
13	13.87	44.23	−3 −8	12.08	34.22	−3 +9	12.96	24.58	+1 +10	16.28	17.16	+2 −5
14	13.77	43.93	−4 −4	12.07	33.89	−2 +11	13.03	24.29	+2 +7	16.42	16.99	+1 −8
15	13.67	43.63	−4 +1	12.06	33.55	0 +11	13.11	24.00	+2 +3	16.56	16.83	0 −10
16	13.58	43.33	−4 +6	12.05	33.22	+1 +9	13.19	23.71	+2 −2	16.70	16.67	−1 −10
17	13.49	43.02	−3 +10	12.05	32.88	+2 +5	13.27	23.42	+2 −6	16.85	16.52	−2 −8
18	13.40	42.71	−1 +12	12.05	32.55	+3 +1	13.36	23.14	+1 −8	16.99	16.37	−3 −5
19	13.31	42.40	+1 +11	12.05	32.21	+2 −3	13.44	22.86	0 −10	17.13	16.23	−3 −1
20	13.23	42.09	+2 +8	12.06	31.88	+1 −7	13.53	22.59	−1 −9	17.28	16.09	−2 +3
21	13.15	41.78	+3 +4	12.07	31.55	0 −9	13.62	22.32	−2 −7	17.43	15.96	−1 +7
22	13.08	41.46	+3 0	12.08	31.21	−1 −10	13.71	22.05	−3 −4	17.58	15.83	0 +9
23	13.00	41.15	+2 −5	12.09	30.88	−2 −9	13.81	21.78	−3 0	17.73	15.71	+2 +10
24	12.93	40.83	+1 −8	12.11	30.55	−2 −6	13.90	21.52	−2 +4	17.88	15.60	+3 +8
25	12.86	40.51	0 −10	12.13	30.22	−3 −2	14.00	21.26	−1 +8	18.03	15.49	+4 +5
26	12.79	40.19	−1 −10	12.15	29.90	−2 +2	14.10	21.01	+1 +10	18.18	15.39	+4 0
27	12.73	39.86	−2 −8	12.17	29.57	−1 +6	14.20	20.76	+2 +10	18.34	15.29	+3 −5
28	12.67	39.54	−2 −5	12.20	29.24	0 +9	14.31	20.51	+4 +7	18.49	15.20	+2 −9
29	12.61	39.21	−2 −1	12.23	28.92	+2 +10	14.42	20.27	+4 +3	18.64	15.12	0 −11
30	12.56	38.88	−2 +3	12.27	28.60	+3 +9	14.53	20.03	+4 −2	18.80	15.04	−2 −10
31	12.51	38.56	−1 +7	12.31	28.28	+4 +5	14.64	19.80	+3 −7	18.96	14.96	−3 −7
32	12.46	38.23	+1 +9				14.76	19.57	+1 −11	19.12	14.89	−4 −2

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−82° 33′ 10″	7.715	−7.650	−82° 33′ 20″	7.718	−7.653	−82° 33′ 40″	7.724	−7.659
20	7.718	−7.653	30	7.721	−7.656	50	7.727	−7.662

$\alpha_{1933.0} = 5^h\ 6^m\ 25^s.76$ $\delta_{1933.0} = -82°\ 33'\ 46''.39$

*) Tag der doppelten unteren Kulmination: Juni 8

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sb) ξ Mensae $5^{m}.85$

Tag	September AR.	September Dekl.	September ☾ Glieder	Oktober AR.	Oktober Dekl.	Oktober ☾ Glieder	November AR.	November Dekl.	November ☾ Glieder	Dezember AR.	Dezember Dekl.	Dezember ☾ Glieder
	$5^h 6^m$ s	— $82° 33'$ "	in 0.01 s 0.01 "	$5^h 6^m$ s	— $82° 33'$ "	in 0.01 s 0.01 "	$5^h 6^m$ s	— $82° 33'$ "	in 0.01 s 0.01 "	$5^h 6^m$ s	— $82° 33'$ "	in 0.01 s 0.01 "
1	19.12	14.89	−4 − 2	23.94	15.76	−2 +10	27.89	22.17	+2 + 5	29.39	31.83	+2 − 6
2	19.28	14.83	−4 + 3	24.09	15.88	0 +11	27.98	22.45	+3 0	29.39	32.18	0 − 9
3	19.44	14.78	−3 + 8	24.24	16.01	+1 +10	28.07	22.74	+2 − 4	29.39	32.53	−1 −10
4	19.60	14.73	−1 +11	24.39	16.15	+2 + 7	28.16	23.03	+1 − 7	29.39	32.88	−2 − 9
5	19.76	14.69	0 +11	24.54	16.30	+3 + 3	28.24	23.32	0 − 9	29.38	33.22	−2 − 7
6	19.92	14.65	+2 + 9	24.69	16.45	+3 − 1	28.32	23.62	−1 −10	29.37	33.57	−3 − 3
7	20.08	14.62	+2 + 6	24.84	16.60	+2 − 5	28.40	23.92	−2 − 9	29.35	33.91	−2 + 1
8	20.24	14.60	+3 + 1	24.98	16.76	+1 − 8	28.48	24.22	−2 − 6	29.33 29.31	34.26 34.60	−2 + 5 0 + 8
9	20.41	14.58	+2 − 3	25.12	16.93	0 −10	28.55	24.53	−3 − 2	29.28	34.95	+1 + 9
10	20.57	14.57	+2 − 6	25.26	17.10	−1 − 9	28.62	24.84	−2 + 2	29.25	35.29	+3 + 9
11	20.73	14.56	0 − 9	25.40	17.28	−2 − 8	28.69	25.15	−1 + 6	29.22	35.64	+4 + 7
12	20.90	14.56	−1 −10	25.54	17.46	−2 − 4	28.76	25.47	0 + 9	29.18	35.98	+4 + 2
13	21.06	14.57	−2 − 9	25.68	17.65	−2 0	28.82	25.79	+2 +10	29.14	36.32	+4 − 3
14	21.22	14.58	−2 − 6	25.81	17.84	−2 + 4	28.88	26.11	+3 + 8	29.10	36.66	+3 − 7
15	21.38	14.60	−3 − 3	25.94	18.04	−1 + 7	28.94	26.43	+4 + 5	29.06	37.00	+1 −10
16	21.54	14.62	−2 + 1	26.07	18.24	+1 + 9	28.99	26.76	+4 + 1	29.01	37.34	−1 −11
17	21.71	14.65	−2 + 5	26.20	18.45	+2 +10	29.04	27.09	+4 − 4	28.96	37.67	−2 − 9
18	21.87	14.69	−1 + 8	26.33	18.67	+3 + 8	29.09	27.42	+2 − 9	28.90	38.01	−4 − 5
19	22.03	14.73	+1 +10	26.45	18.89	+4 + 4	29.13	27.75	0 −11	28.84	38.34	−4 0
20	22.20	14.78	+2 + 9	26.58	19.11	+4 − 1	29.17	28.08	−2 −11	28.78	38.67	−4 + 5
21	22.36	14.84	+4 + 6	26.70	19.34	+3 − 6	29.21	28.41	−3 − 8	28.71	39.00	−3 +10
22	22.52	14.90	+4 + 2	26.82	19.58	+1 − 9	29.24	28.75	−4 − 3	28.64	39.32	−1 +12
23	22.68	14.97	+4 − 3	26.94	19.82	−1 −11	29.27	29.09	−4 + 2	28.57	39.65	0 +11
24	22.84	15.05	+2 − 8	27.05	20.06	−2 −10	29.30	29.43	−3 + 7	28.50	39.97	+2 + 9
25	23.00	15.13	+1 −10	27.17	20.31	−4 − 6	29.32	29.77	−2 +11	28.42	40.29	+2 + 4
26	23.16	15.22	−1 −11	27.28	20.56	−4 − 1	29.34	30.11	0 +12	28.34	40.61	+2 − 1
27	23.32	15.32	−3 − 9	27.39	20.82	−4 + 4	29.36	30.45	+1 +10	28.26	40.92	+2 − 5
28	23.47	15.42	−4 − 4	27.49	21.08	−3 + 9	29.37	30.80	+2 + 7	28.17	41.23	+1 − 8
29	23.63	15.53	−4 + 1	27.59	21.35	−1 +11	29.38	31.14	+3 + 2	28.08	41.54	0 − 9
30	23.78	15.64	−3 + 6	27.69	21.62	0 +11	29.39	31.48	+2 − 2	27.99	41.84	−1 − 9
31	23.94	15.76	−2 +10	27.79	21.89	+2 + 9	29.39	31.83	+2 − 6	27.90	42.14	−2 − 8
32				27.89	22.17	+2 + 5				27.80	42.44	−3 − 5

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−82° 33′ 10″	7.715	−7.650	−82° 33′ 20″	7.718	−7.653	−82° 33′ 40″	7.724	−7.659
20	7.718	−7.653	30	7.721	−7.656	50	7.727	−7.662

$\alpha_{1933.0} = 5^h\ 6^m\ 25^s.76$ $\delta_{1933.0} = -82°\ 33'\ 46''.39$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sc) ζ Octantis $5^m.38$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder in 0.01 s	Januar ☾ Glieder in 0.01 "	Februar AR.	Februar Dekl.	Februar ☾ Glieder in 0.01 s	Februar ☾ Glieder in 0.01 "	März AR.	März Dekl.	März ☾ Glieder in 0.01 s	März ☾ Glieder in 0.01 "	April AR.	April Dekl.	April ☾ Glieder in 0.01 s	April ☾ Glieder in 0.01 "
	$9^h 6^m$ s	−85°23′ "			$9^h 6^m$ s	−85°23′ "			$9^h 6^m$ s	−85°23′ "			$9^h 6^m$ s	−85°24′ "		
1	54.21	34.90	−9	− 1	55.83	46.38	−2	+ 8	53.20	57.25	+3	+ 6	46.84	6.57	+7	− 6
2	54.33	35.24	−8	+ 3	55.80	46.77	+2	+ 7	53.04	57.60	+6	+ 3	46.59	6.81	+5	− 7
3	54.45	35.58	−7	+ 6	55.77	47.16	+4	+ 5	52.88	57.95	+7	− 1	46.34	7.05	+2	− 8
4	54.56	35.93	−4	+ 8	55.73	47.54	+6	+ 1	52.72	58.29	+7	− 4	46.09	7.28	−1	− 6
5	54.67	36.28	−1	+ 8	55.69	47.93	+7	− 2	52.56	58.63	+6	− 7	45.84	7.51	−4	− 3
6	54.78	36.63	+2	+ 6	55.64	48.31	+7	− 5	52.39	58.97	+4	− 8	45.58	7.73	−6	+ 1
7	54.88	36.98	+5	+ 3	55.59 / 55.53	48.70 / 49.09	+5 / +3	−7 / −8	52.22	59.30	+1	− 8	45.32	7.95	−7	+ 5
8	54.98	37.34	+7	0	55.47	49.47	0	− 7	52.04	59.63	−2	− 6	45.06	8.16	−6	+ 9
9	55.07	37.70	+7	− 3	55.40	49.85	−3	− 5	51.86	59.96	−5	− 2	44.79	8.37	−3	+11
10	55.16	38.06	+6	− 6	55.33	50.24	−6	− 1	51.68	60.29	−6	+ 2	44.53	8.58	0	+11
11	55.24	38.42	+4	− 8	55.26	50.62	−7	+ 4	51.49	60.61	−7	+ 6	44.26	8.78	+3	+ 9
12	55.32	38.78	+2	− 8	55.18	51.00	−6	+ 8	51.30	60.93	−5	+ 9	43.99	8.97	+6	+ 5
13	55.39	39.15	−1	− 7	55.10	51.38	−4	+10	51.10	61.25	−2	+11	43.73	9.16	+7	− 1
14	55.46	39.52	−4	− 3	55.02	51.76	−1	+11	50.90	61.56	+1	+10	43.46	9.35	+7	− 7
15	55.52	39.89	−6	+ 1	54.93	52.13	+3	+ 9	50.70	61.87	+4	+ 7	43.19	9.53	+5	−10
16	55.58	40.26	−7	+ 5	54.84	52.51	+6	+ 6	50.50	62.18	+7	+ 2	42.92	9.70	+1	−12
17	55.63	40.63	−5	+ 9	54.74	52.89	+8	0	50.29	62.48	+8	− 3	42.64	9.87	−2	−11
18	55.68	41.01	−3	+11	54.64	53.26	+8	− 5	50.08	62.78	+7	− 8	42.36	10.04	−6	− 8
19	55.72	41.38	+1	+11	54.53	53.63	+6	− 9	49.87	63.08	+4	−11	42.09	10.20	−8	− 3
20	55.76	41.76	+4	+ 8	54.41	54.00	+3	−11	49.65	63.37	0	−12	41.81	10.35	−9	+ 1
21	55.79	42.14	+7	+ 4	54.29	54.37	−1	−11	49.43	63.66	−4	−10	41.53	10.50	−8	+ 5
22	55.82	42.52	+8	− 2	54.17	54.74	−5	− 8	49.21	63.94	−7	− 6	41.25	10.65	−5	+ 8
23	55.84	42.91	+7	− 7	54.05	55.11	−7	− 4	48.98	64.22	−8	− 1	40.97	10.79	−2	+ 8
24	55.86	43.29	+5	−10	53.92	55.47	−9	0	48.76	64.50	−8	+ 3	40.69	10.92	+1	+ 7
25	55.87	43.67	+1	−11	53.78	55.83	−8	+ 5	48.53	64.77	−7	+ 6	40.41	11.05	+4	+ 5
26	55.88	44.06	−3	−10	53.64	56.19	−6	+ 7	48.30	65.04	−4	+ 8	40.12	11.18	+6	+ 2
27	55.88	44.44	−6	− 7	53.50	56.55	−3	+ 8	48.06	65.31	−1	+ 8	39.84	11.30	+7	− 2
28	55.88	44.83	−8	− 2	53.35	56.90	0	+ 8	47.82	65.57	+3	+ 7	39.56	11.41	+7	− 5
29	55.87	45.22	−9	+ 2	53.20	57.25	+3	+ 6	47.58	65.83	+5	+ 4	39.27	11.52	+6	− 7
30	55.86	45.61	−7	+ 6					47.34	66.08	+7	0	38.99	11.63	+3	− 8
31	55.85	45.99	−5	+ 8					47.09	66.33	+7	− 3	38.70	11.73	0	− 7
32	55.83	46.38	−2	+ 8					46.84	66.57	+7	− 6				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−85° 23′ 30″	12.446	−12.406	−85° 23′ 50″	12.461	−12.421	−85° 24′ 10″	12.476	−12.436
40	12.454	−12.414	60	12.469	−12.429	20	12.484	−12.444

$\alpha_{1933.0} = 9^h\ 6^m\ 46^s.59$ $\delta_{1933.0} = -85°\ 23'\ 50''.94$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sc) ζ Octantis $5^m.38$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder	Juni AR.	Juni Dekl.	Juni ☾ Glieder	Juli AR.	Juli Dekl.	Juli ☾ Glieder	August AR.	August Dekl.	August ☾ Glieder
	9^h6^m s	— 85°24′ "	in 0.01s 0.01"	9^h6^m s	— 85°24′ "	in 0.01s 0.01"	9^h6^m s	— 85°23′ "	in 0.01s 0.01"	9^h6^m s	— 85°23′ "	in 0.01s 0.01"
1	38.70	11.73	○ − 7	30.01	12.16	−6 + 6	23.11	67.94	○ +12	19.19	59.97	+8 − 2
2	38.41	11.82	−3 − 4	29.74	12.09	−5 +10	22.92	67.73	+3 +11	19.13	59.67	+7 − 7
3	38.13	11.91	−5 − 1	29.48	12.02	−2 +12	22.74	67.52	+6 + 7	19.08	59.38	+4 −10
4	37.84	12.00	−6 + 4	29.22	11.94	+1 +12	22.56	67.30	+8 + 1	19.03	59.08	+1 −11
5	37.55	12.08	−6 + 8	28.96	11.85	+5 + 9	22.39	67.08	+8 − 4	18.99	58.78	−3 − 9
6	37.27	12.15	−4 +11	28.71	11.76	+7 + 4	22.22	66.85	+6 − 9	18.95	58.48	−7 − 6
7	36.98	12.22	−1 +12	28.46	11.66	+8 − 1	22.05	66.62	+3 −11	18.92	58.18	−8 − 1
8	36.69	12.28	+2 +10	28.21	11.56	+7 − 7	21.88	66.39	−1 −11	*) 18.89	57.88	−8 + 3
9	36.41	12.34	+5 + 6	27.96	11.46	+5 −10	21.72	66.16	−5 − 8	18.86	57.58	−7 + 6
10	36.12	12.39	+7 + 1	27.71	11.35	+1 −12	21.57	65.92	−8 − 5	18.84	57.27	−4 + 8
11	35.84	12.43	+7 − 4	27.47	11.23	−3 −11	21.42	65.68	−9 ○	18.83	56.97	−1 + 8
12	35.55	12.47	+6 − 9	27.22	11.11	−7 − 8	21.27	65.43	−8 + 4	18.82	56.67	+2 + 5
13	35.27	12.51	+3 −12	26.98	10.98	−9 − 3	21.12	65.18	−6 + 7	18.81	56.36	+5 + 2
14	34.98	12.54	−1 −12	26.74	10.85	−9 + 1	20.98	64.93	−3 + 8	18.81	56.06	+6 − 1
15	34.70	12.56	−5 −10	26.50	10.71	−8 + 5	20.85	64.67	○ + 7	18.82	55.76	+7 − 4
16	34.41	12.58	−8 − 6	26.27	10.57	−5 + 7	20.72	64.41	+3 + 4	18.83	55.46	+6 − 7
17	34.13	12.60	−9 − 1	26.04	10.42	−2 + 8	20.59	64.15	+5 + 1	18.84	55.16	+4 − 8
18	33.84	12.61	−8 + 3	25.81	10.27	+2 + 6	20.47	63.89	+7 − 2	18.86	54.85	+1 − 8
19	33.56	12.61	−6 + 7	25.59	10.11	+4 + 3	20.35	63.62	+7 − 5	18.88	54.55	−2 − 7
20	33.28	12.61	−4 + 8	25.37	9.95	+6 ○	20.23	63.35	+5 − 7	18.91	54.25	−4 − 4
21	33.00	12.60	○ + 8	25.15	9.79	+7 − 3	20.12	63.08	+3 − 8	18.94	53.94	−6 ○
22	32.73	12.58	+3 + 6	24.93	9.62	+6 − 6	20.01	62.81	○ − 8	18.98	53.64	−7 + 5
23	32.45	12.56	+5 + 3	24.71	9.45	+5 − 8	19.91	62.54	−3 − 6	19.03	53.34	−5 + 9
24	32.17	12.54	+7 − 1	24.50	9.28	+2 − 8	19.81	62.26	−5 − 2	19.08	53.04	−3 +11
25	31.90	12.51	+7 − 4	24.29	9.10	−1 − 7	19.72	61.98	−6 + 2	19.13	52.74	○ +11
26	31.62	12.48	+6 − 7	24.09	8.92	−3 − 4	19.63	61.69	−6 + 7	19.19	52.44	+4 + 9
27	31.35	12.44	+4 − 8	23.89	8.73	−5 ○	19.55	61.41	−5 +10	19.25	52.14	+7 + 5
28	31.08	12.39	+1 − 8	23.69	8.54	−6 + 5	19.47	61.12	−2 +12	19.31	51.85	+8 ○
29	30.81	12.34	−2 − 6	23.49	8.34	−5 + 9	19.39	60.84	+2 +11	19.38	51.56	+8 − 5
30	30.54	12.29	−4 − 2	23.30	8.14	−3 +11	19.32	60.55	+5 + 8	19.46	51.27	+6 − 9
31	30.27	12.23	−6 + 2	23.11	7.94	○ +12	19.25	60.26	+7 + 4	19.54	50.98	+2 −11
32	30.01	12.16	−6 + 6				19.19	59.97	+8 − 2	19.63	50.69	−2 −10

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−85° 23′ 50″	12.461	−12.421	−85° 24′ 0″	12.469	−12.429	−85° 24′ 10″	12.476	−12.436
60	12.469	−12.429	10	12.476	−12.436	20	12.484	−12.444

$\alpha_{1933.0} = 9^h\ 6^m\ 46^s.59$ $\delta_{1933.0} = -85°\ 23'\ 50''.94$

*) Tag der doppelten unteren Kulmination: Aug. 8

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sc) ζ Octantis $5^m.38$

Tag	September				Oktober				November				Dezember			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	$9^h 6^m$ s	−85° 23′ ″	in 0.01 s	in 0.01 ″	$9^h 6^m$ s	−85° 23′ ″	in 0.01 s	in 0.01 ″	$9^h 6^m$ s	−85° 23′ ″	in 0.01 s	in 0.01 ″	$9^h 6^m$ s	−85° 23′ ″	in 0.01 s	in 0.01 ″
1	19.63	50.69	−2	−10	24.24	43.42	−8	0	31.97	40.46	−1	+8	39.91	43.40	+6	+1
2	19.72	50.40	−5	−7	24.45	43.24	−8	+4	32.24	40.46	+2	+6	40.15	43.59	+7	−3
3	19.82	50.12	−8	−3	24.67	43.06	−6	+7	32.52	40.47	+5	+3	40.39	43.79	+6	−6
4	19.92	49.84	−9	+2	24.89	42.89	−3	+8	32.79	40.49	+6	−1	40.63	44.00	+5	−8
5	20.03	49.56	−8	+6	25.11	42.73	0	+8	33.07	40.51	+7	−4	40.86	44.21	+3	−8
6	20.14	49.28	−5	+8	25.34	42.57	+3	+5	33.34	40.54	+6	−7	41.09	44.43	0	−7
7	20.26	49.01	−2	+8	25.57	42.42	+6	+2	33.62	40.58	+4	−8	41.31	44.65	−3	−5
8	20.38	48.74	+1	+7	25.80	42.27	+7	−2	33.89	40.62	+2	−8	41.53	44.88	−5	−1
9	20.50	48.47	+4	+4	26.03	42.13	+7	−5	34.16	40.67	−1	−6	41.75	45.11	−6	+3
10	20.63	48.20	+6	0	26.27	41.99	+5	−7	34.43	40.73	−3	−4	41.97	45.35	−6	+7
11	20.76	47.93	+7	−3	26.51	41.86	+3	−8	34.71	40.79	−5	0	42.19	45.60	−4	+10
12	20.89	47.67	+6	−6	26.75	41.73	+1	−8	34.98	40.86	−6	+5	42.40	45.85	−1	+12
13	21.03	47.41	+5	−8	26.99	41.61	−2	−6	35.25	40.94	−5	+8	42.61	46.10	+2	+11
14	21.17	47.16	+2	−8	27.24	41.49	−4	−2	35.52	41.02	−3	+11	42.81	46.36	+5	+8
15	21.32	46.91	−1	−7	27.49	41.38	−6	+2	35.79	41.11	0	+12	43.01	46.63	+8	+4
16	21.47	46.66	−3	−5	27.74	41.28	−6	+6	36.06	41.21	+3	+10	43.21	46.90	+8	−2
17	21.63	46.42	−5	−1	27.99	41.18	−5	+9	36.32	41.31	+6	+6	43.40	47.17	+7	−7
18	21.79	46.18	−6	+3	28.24	41.09	−3	+11	36.59	41.42	+8	+1	43.59	47.45	+4	−10
19	21.95	45.94	−6	+7	28.50	41.00	+1	+11	36.85	41.53	+8	−4	43.78	47.73	0	−11
20	22.12	45.71	−4	+10	28.76	40.92	+4	+8	37.12	41.65	+6	−9	43.96	48.02	−4	−10
21	22.29	45.48	−1	+11	29.02	40.85	+7	+4	37.38	41.78	+3	−11	44.14	48.31	−7	−6
22	22.47	45.25	+2	+10	29.28	40.78	+8	−1	37.64	41.91	−1	−11	44.31	48.61	−9	−2
23	22.65	45.03	+5	+7	29.54	40.72	+7	−6	37.90	42.05	−5	−9	44.48	48.91	−9	+3
24	22.84	44.81	+7	+2	29.81	40.66	+5	−10	38.16	42.20	−8	−5	44.65	49.22	−7	+6
25	23.03	44.60	+8	−3	30.08	40.61	+1	−11	38.42	42.35	−9	0	44.81	49.53	−4	+8
26	23.22	44.39	+6	−8	30.34	40.57	−3	−10	38.67	42.51	−8	+4	44.97	49.84	−1	+7
27	23.42	44.19	+3	−11	30.61	40.53	−6	−7	38.92	42.68	−6	+7	45.12	50.16	+3	+5
28	23.62	43.99	0	−11	30.88	40.50	−8	−2	39.17	42.85	−3	+8	45.27	50.48	+5	+2
29	23.82	43.80	−4	−9	31.15	40.48	−9	+2	39.42	43.03	+1	+7	45.41	50.81	+6	−2
30	24.03	43.61	−7	−5	31.42	40.47	−7	+6	39.66	43.21	+4	+4	45.55	51.14	+6	−5
31	24.24	43.42	−8	0	31.70	40.46	−5	+8	39.91	43.40	+6	+1	45.69	51.47	+5	−8
32					31.97	40.46	−1	+8					45.82	51.80	+3	−9

δ	sec δ	tg δ	δ	sec δ	tg δ
−85° 23′ 40″	12.454	−12.414	−85° 23′ 50″	12.461	−12.421
50	12.461	−12.421	60	12.469	−12.429

$\alpha_{1933.0} = 9^h\ 6^m\ 46^s.59$ $\delta_{1933.0} = -85°\ 23'\ 50''.94$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

8d) ι Octantis $5^m.38$

Tag	Januar				Februar				März				April			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	12^h47^m s	−84°45′ ″	in 0.01 s	in 0.01 ″	12^h47^m s	−84°45′ ″	in 0.01 s	in 0.01 ″	12^h47^m s	−84°45′ ″	in 0.01 s	in 0.01 ″	12^h47^m s	−84°45′ ″	in 0.01 s	in 0.01 ″
1	38.57	19.90	−3	−10	46.23	25.39	−6	+4	51.32	34.18	−5	+6	53.94	45.92	+5	+6
2	38.83	19.99	−6	−7	46.45	25.65	−4	+7	51.46	34.54	−2	+8	53.97	46.31	+7	+3
3	39.09	20.08	−7	−2	46.67	25.92	−1	+8	51.59	34.90	+1	+8	54.00	46.70	+7	0
4	39.35	20.18	−7	+2	46.89	26.19	+2	+8	51.72	35.26	+4	+7	54.02 54.04	47.09 47.47	+6 +4	−3 −6
5	39.61	20.29	−5	+5	47.10	26.47	+5	+6	51.85	35.63	+6	+5	54.05	47.86	0	−7
6	39.87	20.40	−3	+8	47.31	26.75	+7	+4	51.97	35.99	+7	+2	54.06	48.24	−3	−6
7	40.13	20.52	0	+8	47.51	27.03	+7	0	52.09	36.36	+7	−2	54.07	48.63	−6	−3
8	40.39	20.65	+3	+7	47.72	27.32	+6	−3	52.21	36.73	+5	−5	54.07	49.02	−8	0
9	40.65	20.79	+6	+5	47.92	27.61	+4	−6	52.32	37.10	+2	−7	54.07	49.40	−9	+4
10	40.91	20.93	+7	+2	48.12	27.91	+1	−7	52.43	37.47	−1	−7	54.07	49.78	−7	+8
11	41.17	21.08	+7	−1	48.31	28.21	−2	−7	52.54	37.85	−4	−6	54.06	50.16	−4	+10
12	41.42	21.23	+6	−4	48.50	28.51	−6	−5	52.64	38.23	−7	−3	54.05	50.53	0	+10
13	41.68	21.39	+3	−7	48.69	28.82	−8	−1	52.74	38.60	−9	+1	54.04	50.91	+5	+7
14	41.93	21.55	0	−7	48.88	29.13	−9	+3	52.84	38.98	−8	+5	54.02	51.29	+8	+3
15	42.19	21.72	−4	−6	49.07	29.44	−8	+7	52.93	39.36	−6	+9	54.00	51.66	+9	−3
16	42.44	21.89	−7	−3	49.25	29.76	−5	+10	53.02	39.74	−2	+10	53.98	52.04	+8	−7
17	42.69	22.07	−9	+1	49.43	30.08	−1	+10	53.10	40.12	+2	+9	53.95	52.41	+6	−11
18	42.94	22.25	−9	+5	49.60	30.41	+4	+8	53.18	40.50	+6	+6	53.92	52.78	+2	−12
19	43.19	22.44	−7	+9	49.77	30.74	+7	+4	53.26	40.89	+8	+1	53.89	53.15	−2	−11
20	43.44	22.63	−3	+11	49.94	31.07	+9	−1	53.33	41.28	+9	−4	53.85	53.51	−5	−9
21	43.68	22.83	+1	+10	50.11	31.40	+8	−6	53.40	41.66	+7	−9	53.81	53.88	−7	−4
22	43.92	23.04	+5	+8	50.27	31.74	+6	−10	53.47	42.05	+4	−11	53.76	54.24	−7	0
23	44.16	23.25	+8	+3	50.43	32.08	+3	−12	53.53	42.43	0	−12	53.71	54.60	−6	+4
24	44.40	23.47	+9	−3	50.59	32.42	−1	−11	53.59	42.82	−3	−10	53.66	54.96	−4	+7
25	44.63	23.69	+8	−8	50.74	32.77	−4	−9	53.65	43.21	−6	−7	53.60	55.31	−1	+8
26	44.87	23.92	+5	−11	50.89	33.12	−6	−5	53.70	43.60	−7	−2	53.54	55.67	+2	+8
27	45.10	24.15	+1	−12	51.04	33.47	−7	−1	53.75	43.98	−7	+2	53.48	56.02	+5	+7
28	45.33	24.39	−2	−11	51.18	33.82	−7	+3	53.80	44.37	−6	+5	53.42	56.37	+6	+4
29	45.56	24.63	−5	−8	51.32	34.18	−5	+6	53.84	44.76	−3	+8	53.35	56.72	+7	+1
30	45.79	24.88	−7	−4					53.88	45.15	0	+8	53.28	57.06	+6	−2
31	46.01	25.13	−7	0					53.91	45.54	+3	+8	53.21	57.40	+4	−5
32	46.23	25.39	−6	+4					53.94	45.92	+5	+6				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−84° 45′ 10″	10.935	−10.889	−84° 45′ 30″	10.946	−10.900	−84° 45′ 50″	10.958	−10.912
20	10.940	−10.895	40	10.952	−10.906	60	10.963	−10.918

$\alpha_{1933.0} = 12^h\ 47^m\ 44^s.20$ $\delta_{1933.0} = -84°\ 45'\ 36''.05$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sd) ι Octantis $5^{m}.38$

Tag	Mai				Juni				Juli				August			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
		—	in			—	in			—	in			—	in	
	12^h47^m	84°45′	0.01 s	0.01″	12^h47^m	84°46′	0.01 s	0.01″	12^h47^m	84°46′	0.01 s	0.01″	12^h47^m	84°46′	0.01 s	0.01″
	s	″			s	″			s	″			s	″		
1	53.21	57.40	+4	− 5	49.42	6.32	−7	− 2	43.79	10.86	−8	+ 9	37.37	10.32	+5	+ 8
2	53.13	57.74	+1	− 6	49.26	6.55	−9	+ 2	43.59	10.93	−5	+11	37.18	10.21	+8	+ 3
3	53.05	58.08	−2	− 6	49.10	6.77	−9	+ 6	43.38	10.99	−1	+12	36.99	10.10	+8	− 3
4	52.97	58.41	−5	− 4	48.93	6.98	−7	+10	43.17	11.05	+3	+10	36.79	9.98	+7	− 7
5	52.88	58.74	−8	− 1	48.76	7.19	−3	+11	42.96	11.10	+7	+ 5	36.60	9.86	+4	−11
6	52.79	59.07	−9	+ 3	48.59	7.40	+1	+11	42.75	11.14	+8	0	36.41	9.73	+1	−12
7	52.69	59.39	−8	+ 7	48.42	7.60	+5	+ 7	42.54	11.18	+8	− 6	36.22	9.60	−3	−10
8	52.59	59.71	−5	+10	48.24	7.80	+8	+ 3	42.33	11.21	+6	−10	36.03	9.46	−6	− 7
9	52.49	60.03	−1	+10	48.07	7.99	+9	− 3	42.12	11.24	+3	−12	35.85	9.32	−7	− 3
10	52.39	60.34	+3	+ 9	47.89	8.17	+8	− 8	41.91	11.26	−1	−12	35.67	9.17	−7	+ 1
11	52.28	60.65	+7	+ 5	47.71	8.35	+5	−12	41.70	11.28	−4	−10	35.49	9.02	−5	+ 5
12	52.17	60.96	+9	0	47.53	8.53	+2	−13	41.49	11.29	−6	− 6	35.31	8.86	−2	+ 7
13	52.06	61.27	+9	− 6	47.34	8.70	−2	−12	41.28	11.30	−7	− 2	35.13	8.69	+1	+ 7
14	51.95	61.57	+7	−10	47.16	8.86	−5	− 9	41.07	11.30	−6	+ 2	34.95	8.52	+4	+ 6
15	51.83	61.87	+4	−12	46.97	9.02	−7	− 4	40.86	11.29	−4	+ 6	34.78	8.35	+6	+ 4
16	51.71	62.16	0	−12	46.78	9.18	−7	0	40.65	11.28	−1	+ 7	34.61	8.17	+7	+ 1
17	51.59	62.45	−3	−10	46.59	9.33	−5	+ 4	40.44	11.26	+2	+ 7	34.44	7.99	+7	− 2
18	51.47	62.74	−6	− 7	46.39	9.47	−3	+ 6	40.23	11.24	+5	+ 6	34.28	7.80	+6	− 5
19	51.34	63.02	−7	− 2	46.20	9.61	0	+ 7	40.02	11.21	+6	+ 3	34.12	7.61	+3	− 6
20	51.21	63.30	−7	+ 2	46.01	9.74	+3	+ 7	39.81	11.18	+7	0	33.96	7.41	0	− 7
21	51.07	63.58	−5	+ 6	45.81	9.87	+6	+ 5	39.61	11.14	+7	− 3	33.80	7.21	−3	− 6
22	50.93	63.85	−2	+ 8	45.61	10.00	+7	+ 2	39.40	11.09	+5	− 5	33.64	7.01	−6	− 4
23	50.79	64.12	+1	+ 8	45.41	10.12	+7	− 1	39.19	11.04	+2	− 7	33.49	6.80	−8	0
24	50.65	64.38	+4	+ 7	45.21	10.23	+6	− 4	38.98	10.98	−1	− 7	33.34	6.59	−9	+ 5
25	50.51	64.64	+6	+ 5	45.01	10.34	+4	− 6	38.78	10.92	−5	− 5	33.20	6.37	−7	+ 9
26	50.36	64.89	+7	+ 2	44.81	10.44	+1	− 7	38.57	10.85	−7	− 2	33.06	6.15	−4	+11
27	50.21	65.14	+7	− 1	44.61	10.54	−3	− 6	38.37	10.77	−9	+ 2	32.92	5.92	0	+11
28	50.06	65.39	+5	− 4	44.41	10.63	−6	− 4	38.17	10.69	−8	+ 7	32.78	5.69	+4	+ 9
29	49.90	65.63	+3	− 6	44.20	10.71	−8	0	37.97	10.61	−6	+10	32.65	5.46	+7	+ 5
30	49.74	65.86	−1	− 6	44.00	10.79	−9	+ 5	37.77	10.52	−3	+12	32.52	5.22	+8	0
31	49.58	66.09	−4	− 5	43.79	10.86	−8	+ 9	37.57	10.42	+1	+11	32.39	4.98	+8	− 6
32	49.42	66.32	−7	− 2					37.37	10.32	+5	+ 8	32.27	4.74	+5	− 9

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−84° 45′ 50″	10.958	−10.912	−84° 46′ 0″	10.963	−10.918	−84° 46′ 10″	10.969	−10.924
60	10.963	−10.918	10	10.969	−10.924	20	10.975	−10.929

$\alpha_{1933.0} = 12^h\ 47^m\ 44^s.20$ $\qquad$ $\delta_{1933.0} = -84°\ 45'\ 36''.05$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sd) ι Octantis $5^m.38$

Tag	September AR.	September Dekl.	September ☾ Glieder		Oktober AR.	Oktober Dekl.	Oktober ☾ Glieder		November AR.	November Dekl.	November ☾ Glieder		Dezember AR.	Dezember Dekl.	Dezember ☾ Glieder	
	$12^h 47^m$	$-84°45'$	in $0^s.01$	in $0''.01$	$12^h 47^m$	$-84°45'$	in $0^s.01$	in $0''.01$	$12^h 47^m$	$-84°45'$	in $0^s.01$	in $0''.01$	$12^h 47^m$	$-84°45'$	in $0^s.01$	in $0''.01$
	s	"			s	"			s	"			s	"		
1	32.27	64.74	+5	−9	30.34	56.23	−4	−9	32.50	47.24	−6	+5	38.24	41.55	+3	+7
2	32.15	64.49	+2	−11	30.34	55.92	−7	−6	32.64	46.98	−3	+7	38.48	41.44	+5	+5
3	32.03	64.24	−2	−11	*)30.35	55.62	−7	−1	32.78	46.73	0	+8	38.72	41.34	+7	+2
4	31.92	63.98	−5	−8	30.36	55.31	−7	+3	32.93	46.48	+3	+7	38.96	41.25	+7	0
5	31.81	63.72	−7	−4	30.38	55.00	−5	+6	33.08	46.24	+6	+5	39.20	41.16	+7	−3
6	31.71	63.46	−7	0	30.40	54.69	−2	+7	33.24	46.00	+7	+2	39.45	41.08	+5	−5
7	31.61	63.20	−6	+4	30.42	54.38	+2	+7	33.40	45.76	+7	−1	39.70	41.00	+2	−6
8	31.51	62.93	−3	+7	30.45	54.08	+4	+6	33.56	45.53	+6	−4	39.95	40.93	−2	−6
9	31.41	62.66	0	+8	30.49	53.78	+6	+4	33.73	45.30	+3	−6	40.20	40.86	−5	−4
10	31.32	62.39	+3	+7	30.53	53.47	+7	+1	33.90	45.08	0	−6	40.45	40.80	−8	−1
11	31.23	62.11	+6	+5	30.57	53.17	+7	−2	34.07	44.86	−3	−5	40.70	40.75	−9	+3
12	31.15	61.83	+7	+2	30.61	52.87	+5	−5	34.25	44.65	−6	−3	40.96	40.70	−8	+7
13	31.07	61.55	+7	−1	30.66	52.57	+2	−6	34.43	44.44	−8	0	41.22	40.66	−6	+11
14	30.99	61.27	+6	−4	30.72	52.27	−1	−7	34.61	44.24	−9	+5	41.47	40.62	−3	+12
15	30.92	60.99	+4	−6	30.78	51.97	−4	−5	34.80	44.04	−8	+8	41.73	40.59	+1	+11
16	30.85	60.70	+1	−7	30.85	51.67	−7	−2	34.99	43.84	−5	+11	41.99	40.57	+5	+8
17	30.79	60.41	−2	−7	30.92	51.38	−8	+1	35.19	43.65	−1	+11	42.25	40.56	+8	+3
18	30.73	60.12	−5	−5	30.99	51.09	−8	+5	35.39	43.47	+3	+9	42.52	40.55	+8	−3
19	30.67	59.83	−8	−1	31.07	50.80	−6	+9	35.59	43.29	+7	+5	42.78	40.55	+7	−8
20	30.62	59.54	−9	+3	31.15	50.51	−3	+11	35.79	43.11	+8	0	43.04	40.55	+4	−11
21	30.57	59.25	−8	+7	31.24	50.23	+1	+10	36.00	42.94	+8	−6	43.31	40.56	+1	−12
22	30.53	58.95	−5	+10	31.33	49.94	+5	+7	36.21	42.78	+6	−10	43.57	40.58	−3	−11
23	30.49	58.65	−2	+11	31.43	49.66	+8	+3	36.43	42.62	+3	−12	43.84	40.61	−6	−8
24	30.46	58.35	+2	+9	31.53	49.38	+9	−3	36.65	42.47	−1	−12	44.11	40.64	−7	−3
25	30.43	58.05	+6	+6	31.64	49.10	+8	−8	36.87	42.32	−4	−9	44.37	40.68	−7	+1
26	30.40	57.74	+8	+1	31.75	48.83	+5	−11	37.09	42.18	−7	−6	44.64	40.72	−5	+5
27	30.38	57.44	+8	−4	31.87	48.56	+1	−12	37.31	42.04	−7	−1	44.90	40.77	−2	+6
28	30.37	57.14	+7	−8	31.99	48.29	−3	−11	37.54	41.91	−6	+3	45.17	40.83	+1	+7
29	30.36	56.83	+3	−11	32.11	48.02	−6	−8	37.77	41.78	−4	+6	45.44	40.89	+4	+5
30	30.35	56.53	0	−11	32.24	47.76	−7	−3	38.00	41.66	−1	+7	45.71	40.96	+6	+3
31	30.34	56.23	−4	−9	32.37	47.50	−7	+1	38.24	41.55	+3	+7	45.97	41.03	+7	0
32					32.50	47.24	−6	+5					46.24	41.11	+7	−3

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−84° 45′ 40″	10.952	−10.906	−84° 45′ 50″	10.958	−10.912	−84° 46′ 0″	10.963	−10.918
50	10.958	−10.912	60	10.963	−10.918	10	10.969	−10.924

$\alpha_{1933.0} = 12^h\ 47^m\ 44^s.20$ $\delta_{1933.0} = -84°\ 45'\ 36''.05$

*) Tag der doppelten unteren Kulmination: Okt. 3

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Se) Octantis 20 G. $6^{m}.52$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder	Februar AR.	Februar Dekl.	Februar ☾ Glieder	März AR.	März Dekl.	März ☾ Glieder	April AR.	April Dekl.	April ☾ Glieder
	$14^{h}52^{m}$ s	−87°52′ "	in 0.01 s, 0.01 "	$14^{h}53^{m}$ s	−87°52′ "	in 0.01 s, 0.01 "	$14^{h}53^{m}$ s	−87°52′ "	in 0.01 s, 0.01 "	$14^{h}53^{m}$ s	−87°52′ "	in 0.01 s, 0.01 "
1	52.76	38.42	○ −12	13.37	37.77	−15 ○	31.87	41.76	−14 +3	48.19	50.09	+7 +9
2	53.37	38.31	−8 −10	14.05	37.84	−12 +4	32.48	41.97	−10 +7	48.61	50.41	+12 +7
3	53.99	38.21	−13 −7	14.74	37.92	−7 +8	33.09	42.19	−3 +9	49.02	50.73	+15 +4
4	54.62	38.12	−15 −2	15.43	38.00	−1 +9	33.69	42.41	+3 +10	49.42	51.05	+14 ○
5	55.25	38.03	−15 +2	16.11	38.09	+5 +9	34.29	42.64	+9 +9	49.81	51.38	+11 −3
6	55.88	37.94	−11 +6	16.80	38.18	+11 +8	34.88	42.87	+14 +6	50.20	51.70	+5 −6
7	56.52	37.86	−5 +8	17.48	38.28	+15 +5	35.47	43.10	+16 +3	50.58	52.03	−3 −8
8	57.17	37.79	+1 +10	18.16	38.39	+16 +1	36.05	43.34	+14 −1	50.96	52.36	−11 −8
9	57.82	37.72	+8 +9	18.84	38.50	+13 −3	36.63	43.58	+10 −5	51.32	52.70	−18 −5
10	58.47	37.66	+13 +7	19.52	38.61	+8 −6	37.20	43.83	+3 −8	51.68	53.03	−22 −1
11	59.13	37.60	+16 +4	20.19	38.73	○ −9	37.77	44.08	−6 −9	52.02	53.37	−20 +3
12	59.79	37.55	+15 ○	20.86	38.86	−9 −9	38.33	44.33	−13 −7	52.36	53.71	−15 +7
13	60.45	37.51	+11 −4	21.53	38.99	−16 −6	38.88	44.59	−19 −4	52.69	54.05	−5 +10
14	61.11	37.47	+5 −7	22.20	39.12	−21 −3	39.43	44.85	−21 ○	53.01	54.39	+5 +10
15	61.77	37.44	−4 −9	22.87	39.26	−21 +2	39.97	45.11	−18 +5	53.32	54.73	+14 +8
16	62.44	37.41	−12 −8	23.54	39.41	−17 +7	40.51	45.38	−11 +8	53.63	55.07	+21 +3
17	63.11	37.39	−19 −5	24.20	39.56	−8 +10	41.04	45.65	−2 +10	53.93	55.42	+23 −2
18	63.79	37.38	−22 ○	24.86	39.72	+2 +11	41.56	45.92	+9 +9	54.22	55.76	+20 −7
19	64.47	37.37	−21 +5	25.51	39.88	+12 +9	42.08	46.20	+17 +6	54.50	56.11	+13 −11
20	65.15	37.36	−14 +9	26.16	40.04	+19 +5	42.59	46.48	+22 +2	54.77	56.45	+4 −12
21	65.83	37.36	−5 +11	26.81	40.21	+22 ○	43.09	46.77	+22 −4	55.03	56.80	−4 −11
22	66.51	37.37	+6 +10	27.46	40.39	+21 −5	43.59	47.06	+17 −8	55.28	57.15	−11 −9
23	67.19	37.39	+15 +8	28.10	40.57	+14 −9	44.08	47.35	+9 −11	55.53	57.50	−15 −4
24	67.87	37.41	+21 +3	28.74	40.76	+6 −11	44.57	47.64	○ −12	55.76	57.85	−16 ○
25	68.56	37.43	+22 −2	29.37	40.95	−3 −11	45.05	47.94	−8 −10	55.98	58.21	−13 +4
26	69.25	37.46	+18 −7	30.00	41.15	−10 −9	45.52	48.24	−13 −7	56.20	58.56	−8 +7
27	69.93	37.50	+11 −11	30.63	41.35	−15 −5	45.98	48.54	−16 −3	56.41	58.92	−2 +9
28	70.62	37.54	+3 −12	31.25	41.55	−16 −1	46.44	48.84	−15 +2	56.61	59.27	+5 +10
29	71.31	37.59	−5 −11	31.87	41.76	−14 +3	46.89	49.15	−12 +6	56.80	59.63	+10 +8
30	71.99	37.64	−12 −8				47.33	49.46	−6 +8	56.98	59.98	+14 +6
31	72.68	37.70	−15 −4				47.76	49.78	+1 +10	57.15	60.34	+15 +2
32	73.37	37.77	−15 ○				48.19	50.09	+7 +9			

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 52′ 30″	26.969	−26.950	−87° 52′ 40″	27.004	−26.986	−87° 53′ 0″	27.075	−27.057
40	27.004	−26.986	50	27.040	−27.021	10	27.111	−27.092

$\alpha_{1933.0} = 14^{h}\ 53^{m}\ 20^{s}.41$ $\delta_{1933.0} = -87°\ 52'\ 48''.05$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Se) Octantis 20 G. $6^{m}.52$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder in $0^{s}.01$	Mai ☾ Glieder in $0''.01$	Juni AR.	Juni Dekl.	Juni ☾ Glieder in $0^{s}.01$	Juni ☾ Glieder in $0''.01$
	$14^{h}53^{m}$ s	−87°53′ "			$14^{h}53^{m}$ s	−87°53′ "		
1	57.15	0.34	+15	+ 2	57.76	11.39	−14	− 7
2	57.31	0.70	+12	− 2	57.62	11.71	−20	− 4
3	57.47	1.05	+ 7	− 5	57.48	12.03	−23	0
4	57.61	1.41	0	− 7	57.33	12.35	−21	+ 5
5	57.74	1.77	− 9	− 8	57.17	12.67	−16	+ 9
6	57.87 57.99	2.12 2.48	−17 −21	− 6 − 3	57.00	12.98	− 5	+11
7	58.10	2.83	−22	+ 2	56.82	13.29	+ 5	+10
8	58.20	3.19	−18	+ 6	56.63	13.59	+15	+ 7
9	58.28	3.54	−10	+ 9	56.43	13.89	+21	+ 3
10	58.36	3.90	0	+10	56.23	14.19	+23	− 3
11	58.43	4.25	+10	+ 9	56.02	14.49	+19	− 8
12	58.49	4.60	+19	+ 5	55.80	14.78	+12	−11
13	58.54	4.96	+23	0	55.57	15.07	+ 4	−13
14	58.58	5.31	+22	− 5	55.33	15.36	− 5	−12
15	58.61	5.66	+17	−10	55.08	15.65	−11	− 9
16	58.64	6.01	+ 9	−12	54.83	15.93	−15	− 4
17	58.66	6.35	0	−12	54.56	16.21	−14	0
18	58.66	6.70	− 8	−10	54.29	16.48	−11	+ 4
19	58.66	7.05	−14	− 7	54.01	16.75	− 5	+ 7
20	58.64	7.39	−16	− 2	53.72	17.02	+ 1	+ 9
21	58.62	7.74	−14	+ 2	53.43	17.28	+ 8	+ 9
22	58.59	8.08	−10	+ 6	53.13	17.54	+12	+ 7
23	58.55	8.42	− 3	+ 8	52.82	17.80	+15	+ 4
24	58.50	8.76	+ 3	+ 9	52.50	18.05	+15	0
25	58.44	9.09	+ 9	+ 8	52.18	18.30	+12	− 3
26	58.37	9.43	+13	+ 6	51.85	18.55	+ 6	− 6
27	58.29	9.76	+15	+ 3	51.51	18.79	− 2	− 7
28	58.20	10.09	+14	0	51.16	19.03	−10	− 7
29	58.10	10.42	+10	− 4	50.81	19.26	−18	− 5
30	57.99	10.75	+ 3	− 7	50.45	19.49	−23	− 1
31	57.88	11.07	− 6	− 7	50.08	19.71	−23	+ 3
32	57.76	11.39	−14	− 7				

Tag	Juli AR.	Juli Dekl.	Juli ☾ Glieder in $0^{s}.01$	Juli ☾ Glieder in $0''.01$	August AR.	August Dekl.	August ☾ Glieder in $0^{s}.01$	August ☾ Glieder in $0''.01$
	$14^{h}53^{m}$ s	−87°53′ "			$14^{h}53^{m}$ s	−87°53′ "		
1	50.08	19.71	−23	+ 3	35.94	24.20	+ 6	+11
2	49.70	19.93	−19	+ 8	35.42	24.26	+14	+ 8
3	49.32	20.14	−10	+11	34.90	24.31	+19	+ 3
4	48.93	20.35	0	+11	34.38	24.36	+20	− 3
5	48.54	20.56	+10	+10	33.86	24.41	+17	− 8
6	48.14	20.76	+18	+ 5	33.33	24.45	+ 9	−11
7	47.73	20.96	+21	0	32.80	24.48	0	−12
8	47.32	21.15	+20	− 5	32.28	24.50	− 7	−11
9	46.90	21.34	+15	−10	31.75	24.52	−13	− 7
10	46.48	21.52	+ 7	−12	31.22	24.53	−15	− 3
11	46.05	21.70	− 2	−12	30.69	24.54	−14	+ 1
12	45.61	21.87	− 9	−10	30.16	24.54	− 9	+ 5
13	45.17	22.04	−14	− 6	29.63	24.54	− 3	+ 8
14	44.72	22.20	−15	− 2	29.10	24.53	+ 4	+ 9
15	44.27	22.35	−12	+ 3	28.57	24.51	+10	+ 8
16	43.81	22.50	− 7	+ 6	28.04	24.49	+14	+ 6
17	43.34	22.65	− 1	+ 8	27.51	24.46	+16	+ 3
18	42.87	22.79	+ 6	+ 9	26.98	24.43	+16	− 1
19	42.40	22.92	+11	+ 7	26.45	24.39	+12	− 4
20	41.92	23.05	+15	+ 5	25.93	24.34	+ 6	− 7
21	41.44	23.18	+16	+ 1	25.40	24.29	− 2	− 8
22	40.96	23.30	+14	− 2	24.88	24.23	−11	− 8
23	40.47	23.41	+ 9	− 5	24.35	24.17	−18	− 5
24	39.98	23.52	+ 2	− 8	23.83	24.10	−22	− 1
25	39.49	23.63	− 6	− 8	23.31	24.03	−21	+ 4
26	38.99	23.73	−15	− 7	22.79	23.95	−16	+ 8
27	38.49	23.82	−20	− 3	22.28	23.87	− 8	+11
28	37.99	23.91	−23	+ 1	21.77	23.78	+ 2	+11
29	37.48	23.99	−20	+ 6	21.26	23.68	+11	+ 9
30	36.97	24.06	−14	+10	20.76	23.58	+18	+ 5
31	36.46	24.13	− 5	+11	20.26	23.47	+20	0
32	35.94	24.20	+ 6	+11	19.76	23.36	+18	− 6

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 53′ 0″	27.075	−27.057	−87° 53′ 10″	27.111	−27.092	−87° 53′ 20″	27.146	−27.128
10	27.111	−27.092	20	27.146	−27.128	30	27.182	−27.164

$\alpha_{1933.0} = 14^{h}\ 53^{m}\ 20^{s}.41$ $\delta_{1933.0} = -87^{\circ}\ 52'\ 48''.05$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Se) Octantis 20 G. $6^{m}.52$

Tag	September				Oktober				November				Dezember			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	$14^{h}53^{m}$	$-87°53'$	in 0.01^{s}	in $0.01''$	$14^{h}53^{m}$	$-87°53'$	in 0.01^{s}	in $0.01''$	$14^{h}53^{m}$	$-87°52'$	in 0.01^{s}	in $0.01''$	$14^{h}53^{m}$	$-87°52'$	in 0.01^{s}	in $0.01''$
	s	"			s	"			s	"			s	"		
1	19.76	23.36	+18	−6	7.44	17.59	−2	−11	3.08	68.45	−15	+1	9.22	59.56	0	+8
2	19.27	23.24	+12	−10	7.14	17.33	−10	−10	3.12	68.14	−10	+5	9.60	59.30	+7	+8
3	18.78	23.11	+3	−12	6.85	17.07	−15	−6	3.16	67.82	−4	+8	9.99	59.05	+13	+7
4	18.30	22.98	−5	−11	6.57	16.80	−16	−1	*)3.22	67.50	+2	+9	10.39	58.80	+16	+4
5	17.82	22.84	−12	−8	6.30	16.53	−14	+3	3.30	67.19	+9	+8	10.79	58.55	+16	+1
6	17.34	22.70	−15	−4	6.04	16.26	−8	+6	3.38	66.88	+13	+6	11.21	58.31	+13	−2
7	16.87	22.55	−15	0	5.79	15.99	−2	+8	3.48	66.56	+16	+3	11.63	58.07	+8	−5
8	16.40	22.40	−12	+4	5.56	15.71	+5	+9	3.59	66.25	+15	0	12.06	57.83	+1	−7
9	15.94	22.24	−6	+7	5.34	15.43	+11	+8	3.71	65.94	+11	−4	12.50	57.60	−8	−7
10	15.48	22.08	+1	+9	5.12	15.15	+15	+5	3.84	65.63	+5	−6	12.95	57.37	−15	−6
11	15.03	21.91	+8	+9	4.91	14.86	+16	+2	3.99	65.32	−3	−7	13.41	57.15	−21	−2
12	14.59	21.74	+13	+7	4.71	14.57	+14	−1	4.14	65.02	−11	−7	13.88	56.93	−23	+2
13	14.15	21.56	+16	+4	4.53	14.28	+9	−5	4.31	64.71	−17	−5	14.36	56.72	−21	+6
14	13.71	21.38	+16	+1	4.35	13.99	+3	−7	4.49	64.40	−22	−1	14.85	56.51	−14	+10
15	13.28	21.19	+13	−3	4.19	13.70	−5	−8	4.68	64.10	−22	+3	15.35	56.30	−5	+11
16	12.86	21.00	+8	−6	4.03	13.40	−13	−7	4.88	63.80	−17	+7	15.85	56.10	+5	+11
17	12.44	20.80	0	−8	3.89	13.10	−19	−4	5.09	63.50	−9	+10	16.36	55.90	+15	+7
18	12.03	20.60	−8	−8	3.76	12.80	−22	0	5.31	63.21	0	+11	16.88	55.71	+20	+2
19	11.63	20.39	−15	−6	3.64	12.50	−20	+4	5.55	62.91	+10	+9	17.41	55.52	+21	−3
20	11.24	20.18	−20	−3	3.53	12.19	−14	+8	5.79	62.62	+18	+5	17.94	55.34	+17	−8
21	10.86	19.97	−21	+1	3.43	11.89	−5	+10	6.05	62.33	+22	0	18.48	55.17	+10	−12
22	10.48	19.75	−18	+6	3.34	11.58	+5	+10	6.32	62.04	+20	−6	19.03	55.00	+1	−13
23	10.11	19.53	−11	+9	3.26	11.27	+14	+8	6.60	61.75	+15	−10	19.59	54.83	−7	−11
24	9.74	19.30	−1	+11	3.19	10.96	+20	+3	6.89	61.46	+6	−12	20.15	54.67	−13	−7
25	9.39	19.07	+9	+10	3.14	10.65	+21	−2	7.19	61.18	−3	−12	20.72	54.51	−15	−3
26	9.04	18.83	+17	+6	3.09	10.33	+18	−7	7.51	60.90	−10	−10	21.29	54.36	−13	+2
27	8.70	18.59	+21	+1	3.06	10.02	+11	−11	7.83	60.63	−15	−6	21.87	54.22	−8	+5
28	8.37	18.34	+20	−4	3.04	9.71	+2	−12	8.16	60.36	−15	−1	22.46	54.08	−2	+8
29	8.05	18.09	+15	−9	3.03	9.39	−7	−11	8.51	60.09	−12	+3	23.06	53.94	+5	+8
30	7.74	17.84	+7	−11	3.03	9.08	−13	−8	8.86	59.82	−6	+7	23.66	53.81	+11	+7
31	7.44	17.59	−2	−11	3.05	8.77	−16	−3	9.22	59.56	0	+8	24.27	53.69	+15	+5
32					3.08	8.45	−15	+1					24.88	53.58	+17	+2

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 52′ 50″	27.039	−27.021	−87° 53′ 0″	27.075	−27.057	−87° 53′ 20″	27.146	−27.128
60	27.075	−27.057	10	27.111	−27.092	30	27.182	−27.164

$\alpha_{1933.0} = 14^{h}\ 53^{m}\ 20^{s}.41$ $\delta_{1933.0} = -87°\ 52'\ 48''.05$

*) Tag der doppelten unteren Kulmination: Nov. 4

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sf) Octantis 26 G. $6^m.13$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder in		Februar AR.	Februar Dekl.	Februar ☾ Glieder in		März AR.	März Dekl.	März ☾ Glieder in		April AR.	April Dekl.	April ☾ Glieder in	
	$16^h 35^m$	— $86° 14'$	0.01 s	0.01 "	$16^h 35^m$	— $86° 14'$	0.01 s	0.01 "	$16^h 35^m$	— $86° 14'$	0.01 s	0.01 "	$16^h 35^m$	— $86° 14'$	0.01 s	0.01 "
	s	"			s	"			s	"			s	"		
1	13.15	55.54	+ 6	−11	23.49	50.23	− 8	− 3	34.77	49.54	− 9	0	46.86	53.22	0	+10
2	13.42	55.30	0	−11	23.88	50.14	− 9	+ 2	35.17	49.59	− 8	+ 4	47.21	53.41	+ 3	+ 9
3	13.70	55.07	− 4	− 9	24.26	50.05	− 8	+ 6	35.58	49.64	− 6	+ 8	47.56	53.60	+ 6	+ 7
4	13.98	54.84	− 7	− 6	24.65	49.97	− 5	+ 9	35.99	49.70	− 3	+10	47.91	53.80	+ 8	+ 3
5	14.26	54.62	− 9	− 1	25.04	49.89	− 1	+10	36.40	49.76	+ 1	+10	48.26	54.00	+ 8	− 1
6	14.55	54.40	− 9	+ 3	25.43	49.82	+ 2	+10	36.80	49.83	+ 4	+ 9	48.61	54.20	+ 6	− 5
7	14.84	54.18	− 7	+ 7	25.83	49.75	+ 6	+ 8	37.21	49.91	+ 7	+ 6	48.95	54.40	+ 2	− 8
8	15.14	53.97	− 4	+ 9	26.23	49.69	+ 8	+ 4	37.61	49.99	+ 8	+ 2	49.29	54.61	− 3	−10
9	15.45	53.76	0	+10	26.63	49.63	+ 9	0	38.02	50.07	+ 8	− 3	49.63	54.82	− 7	− 9
10	15.76	53.56	+ 4	+ 9	27.03	49.58	+ 7	− 4	38.42	50.16	+ 5	− 7	49.96	55.04	−11	− 6
11	16.07	53.36	+ 7	+ 7	27.43	49.53	+ 4	− 8	38.82	50.25	+ 1	− 9	50.29	55.26	−13	− 1
12	16.39	53.16	+ 8	+ 3	27.83	49.49	− 1	−10	39.22	50.35	− 4	−10	50.61	55.48	−11	+ 4
13	16.71	52.97	+ 8	− 2	28.23	49.45	− 6	− 9	39.62	50.45	− 8	− 8	50.93	55.71	− 7	+ 8
14	17.04	52.78	+ 6	− 6	28.64	49.42	−10	− 7	40.02	50.56	−11	− 4	51.25	55.94	− 2	+10
15	17.37	52.60	+ 2	− 9	29.05	49.39	−13	− 2	40.42	50.67	−12	+ 1	51.57	56.17	+ 4	+10
16	17.70	52.42	− 3	−10	29.45	49.37	−12	+ 3	40.81	50.78	−10	+ 6	51.88	56.41	+10	+ 8
17	18.04	52.25	− 8	− 8	29.86	49.35	− 9	+ 7	41.20	50.90	− 6	+ 9	52.19	56.65	+13	+ 3
18	18.38	52.08	−12	− 5	30.27	49.34	− 4	+10	41.60	51.02	0	+11	52.49	56.90	+14	− 2
19	18.73	51.92	−13	0	30.68	49.33	+ 2	+10	41.99	51.15	+ 6	+10	52.79	57.15	+12	− 7
20	19.08	51.76	−12	+ 5	31.08	49.33	+ 8	+ 9	42.38	51.28	+11	+ 6	53.09	57.40	+ 8	−10
21	19.43	51.60	− 8	+ 9	31.49	49.33	+12	+ 4	42.76	51.42	+13	+ 1	53.38	57.65	+ 3	−12
22	19.78	51.45	− 2	+11	31.90	49.34	+13	− 1	43.14	51.56	+13	− 4	53.67	57.90	− 2	−11
23	20.14	51.31	+ 5	+10	32.31	49.35	+12	− 6	43.52	51.71	+10	− 8	53.95	58.16	− 6	− 8
24	20.50	51.17	+10	+ 7	32.72	49.37	+ 9	− 9	43.90	51.86	+ 6	−11	54.23	58.42	− 8	− 3
25	20.86	51.03	+13	+ 3	33.13	49.40	+ 4	−11	44.28	52.02	0	−11	54.50	58.68	− 9	+ 1
26	21.23	50.90	+13	− 3	33.54	49.43	− 1	−11	44.66	52.18	− 4	− 9	54.77	58.95	− 8	+ 5
27	21.60	50.78	+11	− 8	33.95	49.46	− 5	− 8	45.03	52.34	− 7	− 6	55.04	59.22	− 5	+ 8
28	21.97	50.66	+ 7	−11	34.36	49.50	− 8	− 4	45.40	52.51	− 9	− 2	55.30	59.49	− 2	+10
29	22.35	50.55	+ 2	−11	34.77	49.54	− 9	0	45.77	52.68	− 9	+ 3	55.56	59.76	+ 2	+10
30	22.73	50.44	− 3	−10					46.14	52.86	− 7	+ 7	55.81	60.04	+ 5	+ 8
31	23.11	50.33	− 6	− 7					46.50	53.04	− 4	+ 9	56.06	60.32	+ 7	+ 5
32	23.49	50.23	− 8	− 3					46.86	53.22	0	+10				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−86° 14′ 40″	15.267	−15.234	−86° 14′ 50″	15.278	−15.246	−86° 15′ 0″	15.290	−15.257
50	15.278	−15.246	60	15.290	−15.257	10	15.301	−15.268

$\alpha_{1933.0} = 16^h\ 35^m\ 31^s.32$ $\delta_{1933.0} = -86°\ 14'\ 57''.47$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sf) Octantis 26 G. $6^{m}.13$

Tag	Mai			Juni			Juli			August		
	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder
	$16^{h}35^{m}$	$-86°15'$	in $0^{s}.01$ $0''.01$	$16^{h}36^{m}$	$-86°15'$	in $0^{s}.01$ $0''.01$	$16^{h}35^{m}$	$-86°15'$	in $0^{s}.01$ $0''.01$	$16^{h}35^{m}$	$-86°15'$	in $0^{s}.01$ $0''.01$
	s	"		s	"		s	"		s	"	
1	56.06	0.32	+ 7 + 5	1.44	10.10	− 5 − 9	61.41	19.36	−14 − 2	56.40	26.71	− 2 +11
2	56.30	0.60	+ 7 + 1	1.52	10.42	− 9 − 8	61.32	19.64	−14 + 3	56.17	26.88	+ 4 +10
3	56.54	0.89	+ 6 − 4	1.59	10.74	−13 − 4	61.23	19.92	−11 + 8	55.94	27.05	+ 9 + 7
4	56.78	1.17	+ 3 − 7	1.66	11.05	−14 0	61.13	20.20	− 5 +11	55.70	27.22	+13 + 2
5	57.01	1.46	− 1 − 9	1.72	11.37	−12 + 5	61.03	20.48	+ 1 +11	55.46	27.38	+13 − 3
6	57.24	1.75	− 6 − 9	1.78	11.69	− 8 + 9	60.92	20.75	+ 7 + 9	55.21	27.54	+10 − 8
7	57.46	2.04	−11 − 7	1.83	12.01	− 2 +11	60.81	21.02	+12 + 5	54.96	27.69	+ 6 −11
8	57.68	2.33	−13 − 3	1.88	12.33	+ 5 +10	60.69	21.29	+14 − 1	54.71	27.84	+ 1 −12
9	57.89	2.63	−13 + 2	1.92	12.65	+10 + 7	60.56	21.55	+13 − 6	54.46	27.98	− 3 −10
10	58.10	2.93	−10 + 7	1.96	12.97	+14 + 2	60.43	21.81	+ 9 −10	54.20	28.12	− 7 − 6
11	58.30	3.23	− 5 +10	1.99	13.28	+14 − 3	60.30	22.07	+ 5 −12	53.94	28.25	− 8 − 2
12	58.50	3.53	+ 2 +11	2.01	13.60	+12 − 8	60.16	22.33	0 −11	53.68	28.38	− 7 + 3
13	58.69	3.83	+ 8 + 9	2.03	13.91	+ 8 −11	60.01	22.59	− 5 − 8	53.41	28.50	− 5 + 7
14	58.88	4.13	+13 + 5	2.04	14.23	+ 3 −12	59.86	22.84	− 7 − 4	53.14	28.61	− 2 + 9
15	59.06	4.44	+15 0	2.05	14.54	− 2 −10	59.71	23.09	− 8 0	52.87	28.72	+ 2 +10
16	59.23	4.75	+14 − 5	2.05	14.85	− 6 − 7	59.55	23.33	− 7 + 5	52.60	28.83	+ 5 + 8
17	59.40	5.05	+11 − 9	2.05	15.17	− 8 − 3	59.39	23.57	− 4 + 8	52.32	28.93	+ 8 + 6
18	59.57	5.36	+ 6 −11	2.04	15.48	− 8 + 2	59.22	23.81	− 1 +10	52.04	29.02	+ 9 + 3
19	59.73	5.67	0 −11	2.02	15.78	− 6 + 6	59.05	24.04	+ 3 +10	51.76	29.11	+ 8 − 2
20	59.89	5.99	− 4 − 9	2.00	16.09	− 3 + 9	58.87	24.27	+ 6 + 8	51.48	29.19	+ 6 − 5
21	60.04	6.30	− 7 − 5	1.98	16.40	0 +10	58.69	24.50	+ 8 + 5	51.19	29.27	+ 2 − 8
22	60.18	6.61	− 9 − 1	1.95	16.70	+ 4 + 9	58.50	24.72	+ 9 + 1	50.91	29.34	− 2 −10
23	60.32	6.93	− 8 + 4	1.91	17.00	+ 7 + 7	58.31	24.94	+ 8 − 3	50.62	29.41	− 7 − 9
24	60.46	7.24	− 6 + 7	1.87	17.31	+ 8 + 4	58.11	25.15	+ 5 − 7	50.33	29.47	−11 − 6
25	60.59	7.55	− 3 + 9	1.82	17.61	+ 8 0	57.91	25.36	0 − 9	50.04	29.52	−13 − 1
26	60.71	7.87	+ 1 +10	1.76	17.90	+ 6 − 4	57.71	25.57	− 5 − 9	49.75	29.57	−12 + 4
27	60.83	8.18	+ 4 + 9	1.70	18.20	+ 2 − 7	57.50	25.77	−10 − 8	49.45	29.61	− 9 + 8
28	60.95	8.50	+ 7 + 6	1.64	18.49	− 2 − 9	57.29	25.97	−13 − 4	49.16	29.65	− 4 +11
29	61.06	8.82	+ 8 + 2	1.57	18.78	− 7 − 9	57.07	26.16	−14 + 1	48.87	29.68	+ 2 +11
30	61.16	9.14	+ 7 − 2	1.49	19.07	−12 − 6	56.85	26.35	−12 + 6	48.57	29.71	+ 7 + 8
31	61.26 61.35	9.46 9.78	+ 4 − 6 0 − 8	1.41	19.36	−14 − 2	56.63	26.53	− 8 +10	48.27	29.73	+11 + 4
32	61.44	10.10	− 5 − 9				56.40	26.71	− 2 +11	47.97	29.75	+13 − 2

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−86° 15′ 0″	15.290	−15.257	−86° 15′ 10″	15.301	−15.268	−86° 15′ 20″	15.312	−15.280
10	15.301	−15.268	20	15.312	−15.280	30	15.324	−15.291

$\alpha_{1933.0} = 16^{h}\ 35^{m}\ 31^{s}.32$ $\delta_{1933.0} = -86°\ 14'\ 57''.47$

Sf) Octantis 26 G. $6^m.13$

Tag	September AR.	September Dekl.	☾ Glieder		Oktober AR.	Oktober Dekl.	☾ Glieder		November AR.	November Dekl.	☾ Glieder		Dezember AR.	Dezember Dekl.	☾ Glieder	
		—	in			—	in			—	in			—	in	
	16^h35^m	86°15′	s 0.01	" 0.01	16^h35^m	86°15′	s 0.01	" 0.01	16^h35^m	86°15′	s 0.01	" 0.01	16^h35^m	86°15′	s 0.01	" 0.01
	s	"			s	"			s	"			s	"		
1	47.97	29.75	+13	− 2	39.26	27.52	+ 4	−11	33.10	20.42	− 9	− 2	32.42	11.12	− 4	+ 8
2	47.67	29.76	+11	− 7	39.00	27.36	− 1	−11	32.98	20.13	− 8	+ 3	32.50	10.81	0	+ 9
3	47.37	29.76	+ 7	−10	38.74	27.19	− 5	− 8	32.87	19.84	− 6	+ 6	32.59	10.49	+ 3	+ 9
4	47.07	29.76	+ 2	−11	38.48	27.02	− 8	− 5	32.76	19.55	− 3	+ 9	32.68	10.17	+ 6	+ 7
5	46.77	29.75	− 2	−10	38.23	26.84	− 9	0	32.66	19.25	+ 1	+10	32.78	9.85	+ 8	+ 4
6	46.47	29.74	− 6	− 7	37.98	26.66	− 8	+ 4	32.57	18.95	+ 5	+ 9	32.89	9.54	+ 8	0
7	46.17	29.72	− 8	− 3	37.73	26.47	− 5	+ 8	32.49	18.65	+ 7	+ 6	33.01	9.23	+ 7	− 4
8	45.87	29.69	− 8	+ 1	37.49	26.28	− 1	+ 9	32.41	18.35	+ 8	+ 3	33.13	8.92	+ 4	− 7
9	45.57	29.66	− 6	+ 5	37.25	26.08	+ 2	+10	32.34	18.05	+ 8	− 1	33.26	8.61	− 1	− 9
10	45.27	29.62	− 3	+ 8	37.02	25.88	+ 5	+ 8	32.27	17.75	+ 6	− 5	33.39	8.31	− 6	− 9
11	44.97	29.58	0	+10	36.79	25.68	+ 8	+ 5	32.21	17.44	+ 2	− 8	33.53	8.01	−10	− 7
12	44.67	29.53	+ 4	+ 9	36.57	25.47	+ 8	+ 2	32.16	17.13	− 3	− 9	33.68	7.71	−13	− 3
13	44.37	29.48	+ 6	+ 7	36.35	25.26	+ 7	− 3	32.12	16.82	− 7	− 8	33.83	7.41	−14	+ 2
14	44.07	29.42	+ 8	+ 4	36.14	25.04	+ 5	− 6	32.08	16.51	−11	− 6	33.99	7.11	−12	+ 6
15	43.77	29.35	+ 8	0	35.93	24.81	+ 1	− 8	32.05	16.20	−13	− 2	34.16	6.81	− 8	+10
16	43.47	29.28	+ 7	− 4	35.72	24.58	− 4	− 9	32.02	15.89	−13	+ 3	34.33	6.51	− 2	+11
17	43.18	29.20	+ 4	− 7	35.52	24.35	− 8	− 8	32.00	15.57	−10	+ 7	34.51	6.22	+ 4	+10
18	42.89	29.12	− 1	− 9	35.32	24.11	−12	− 5	31.99	15.26	− 5	+10	34.70	5.93	+10	+ 6
19	42.60	29.03	− 5	− 9	35.13	23.87	−13	0	31.98	14.94	+ 2	+11	34.89	5.64	+13	+ 1
20	42.31	28.94	−10	− 7	34.94	23.63	−11	+ 5	31.98	14.63	+ 8	+ 9	35.09	5.36	+13	− 4
21	42.02	28.84	−12	− 3	34.76	23.38	− 7	+ 9	31.99	14.31	+12	+ 5	35.29	5.08	+11	− 9
22	41.73	28.73	−12	+ 2	34.58	23.13	− 2	+11	32.00	13.99	+14	− 1	35.50	4.81	+ 6	−11
23	41.45	28.62	−10	+ 7	34.41	22.88	+ 4	+10	32.02	13.67	+13	− 6	35.71	4.54	+ 1	−12
24	41.17	28.50	− 6	+10	34.24	22.62	+10	+ 7	32.05	13.35	+ 9	−10	35.93	4.27	− 3	−10
25	40.89	28.37	0	+11	34.08	22.36	+13	+ 2	32.08	13.03	+ 4	−12	36.16	4.00	− 7	− 6
26	40.61	28.24	+ 6	+ 9	33.92	22.09	+13	− 3	32.12	12.71	− 1	−11	36.39	3.73	− 8	− 1
27	40.33	28.11	+11	+ 6	33.77	21.82	+11	− 8	32.17	12.39	− 5	− 8	36.63	3.47	− 7	+ 4
28	40.06	27.97	+13	0	33.62	21.54	+ 7	−11	32.22	12.08	− 8	− 4	36.87	3.21	− 4	+ 7
29	39.79	27.82	+12	− 5	33.48	21.26	+ 1	−12	32.28	11.76	− 8	+ 1	37.12	2.95	− 1	+ 9
30	39.52	27.67	+ 9	− 9	33.35	20.98	− 3	−10	*)32.35	11.44	− 7	+ 5	37.37	2.70	+ 3	+ 9
31	39.26	27.52	+ 4	−11	33.22	20.70	− 7	− 6	32.42	11.12	− 4	+ 8	37.63	2.45	+ 6	+ 8
32					33.10	20.42	− 9	− 2					37.89	2.21	+ 8	+ 5

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−86° 15′ 0″	15.290	−15.257	−86° 15′ 10″	15.301	−15.268	−86° 15′ 20″	15.312	−15.280
10	15.301	−15.268	20	15.312	−15.280	30	15.324	−15.291

$\alpha_{1933.0} = 16^h\ 35^m\ 31^s.32$ $\delta_{1933.0} = -86°\ 14'\ 57''.47$

*) Tag der doppelten unteren Kulmination: Nov. 30

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sg) χ Octantis $5^{m}.22$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder		Februar AR.	Februar Dekl.	Februar ☾ Glieder	
	18^h15^m	−87°39′	in 0.01^s	in $0.01''$	18^h15^m	−87°39′	in 0.01^s	in $0.01''$
	s	″			s	″		
1	15.20	44.45	+15	−9	26.23	35.43	−10	−5
2	15.41	44.13	+8	−10	26.72	35.19	−14	−1
3	15.64	43.81	0	−10	27.21	34.95	−14	+3
4	15.88	43.49	−7	−8	27.71	34.71	−12	+6
5	16.13	43.17	−12	−4	28.21	34.48	−8	+9
6	16.38	42.85	−14	0	28.72	34.25	−3	+10
7	16.65	42.53	−14	+4	29.24	34.03	+3	+9
8	16.93	42.22	−11	+7	29.77	33.81	+9	+7
9	17.22	41.91	−6	+9	30.30	33.59	+12	+3
10	17.52	41.60	0	+10	30.83	33.38	+13	−2
11	17.83	41.29	+5	+9	31.37	33.17	+10	−6
12	18.14	40.98	+10	+5	31.92	32.97	+5	−10
13	18.46	40.67	+13	+1	32.47	32.77	−2	−11
14	18.80	40.37	+12	−4	33.03	32.58	−10	−10
15	19.14	40.07	+8	−8	33.59	32.39	−16	−7
16	19.49	39.77	+1	−10	34.16	32.20	−19	−1
17	19.85	39.48	−6	−11	34.73	32.02	−17	+4
18	20.22	39.19	−14	−9	35.31	31.84	−12	+8
19	20.60	38.90	−19	−4	35.89	31.67	−3	+11
20	20.99	38.61	−20	+1	36.47	31.50	+6	+11
21	21.38	38.33	−17	+6	37.06	31.34	+14	+8
22	21.78	38.05	−9	+10	37.66	31.18	+19	+4
23	22.19	37.77	0	+11	38.26	31.02	+21	−1
24	22.61	37.49	+9	+10	38.86	30.87	+18	−6
25	23.04	37.22	+17	+7	39.46	30.72	+12	−9
26	23.47	36.95	+21	+2	40.07	30.58	+5	−11
27	23.91	36.69	+21	−3	40.69	30.44	−3	−10
28	24.36	36.43	+17	−8	41.30	30.31	−9	−7
29	24.82	36.17	+10	−10	41.92	30.18	−13	−3
30	25.28	35.92	+2	−10				
31	25.75	35.67	−5	−9				
32	26.23	35.43	−10	−5				

Tag	März AR.	März Dekl.	März ☾ Glieder		April AR.	April Dekl.	April ☾ Glieder	
	18^h15^m	−87°39′	in 0.01^s	in $0.01''$	18^h16^m	−87°39′	in 0.01^s	in $0.01''$
	s	″			s	″		
1	41.92	30.18	−13	−3	1.90	28.60	−7	+9
2	42.54	30.06	−15	+1	2.54	28.63	−1	+10
3	43.17	29.94	−14	+5	3.19	28.66	+4	+9
4	43.80	29.83	−10	+8	3.83	28.69	+9	+6
5	44.43	29.72	−5	+10	4.47	28.73	+11	+2
6	45.06	29.62	+1	+10	5.11	28.78	+11	−3
7	45.69	29.52	+6	+8	5.75	28.83	+8	−7
8	46.33	29.43	+10	+4	6.38	28.88	+2	−10
9	46.97	29.34	+12	0	7.01	28.94	−5	−11
10	47.61	29.25	+11	−5	7.64	29.00	−12	−9
11	48.26	29.17	+7	−9	8.27	29.07	−17	−6
12	48.90	29.10	+1	−11	8.90	29.15	−18	0
13	49.54	29.03	−7	−11	9.52	29.23	−16	+5
14	50.19	28.96	−14	−8	10.14	29.31	−9	+9
15	50.84	28.90	−18	−4	10.76	29.39	0	+11
16	51.49	28.85	−18	+2	11.37	29.48	+9	+11
17	52.14	28.80	−14	+7	11.98	29.58	+17	+8
18	52.79	28.75	−6	+10	12.59	29.68	+22	+3
19	53.44	28.71	+3	+11	13.20	29.78	+22	−2
20	54.09	28.67	+12	+10	13.80	29.89	+18	−7
21	54.74	28.64	+18	+6	14.40	30.00	+11	−10
22	55.40	28.61	+21	+1	14.99	30.12	+3	−11
23	56.05	28.59	+20	−4	15.58	30.24	−4	−9
24	56.70	28.57	+15	−8	16.16	30.37	−10	−6
25	57.35	28.56	+8	−10	16.74	30.50	−14	−2
26	58.00	28.55	0	−10	17.32	30.63	−14	+2
27	58.65	28.55	−7	−8	17.89	30.77	−13	+6
28	59.30	28.55	−12	−5	18.46	30.91	−9	+9
29	59.95	28.56	−15	0	19.02	31.06	−4	+10
30	60.60	28.57	−14	+4	19.58	31.21	+2	+9
31	61.25	28.58	−12	+7	20.14	31.37	+7	+7
32	61.90	28.60	−7	+9				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 39′ 20″	24.446	−24.425	−87° 39′ 30″	24.475	−24.454	−87° 39′ 40″	24.504	−24.483
30	24.475	−24.454	40	24.504	−24.483	50	24.533	−24.513

$\alpha_{1933.0} = 18^h\ 15^m\ 43^s.17$ $\delta_{1933.0} = -87°\ 39'\ 38''.56$

Sg) χ Octantis $5^{m}.22$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder		Juni AR.	Juni Dekl.	Juni ☾ Glieder		Juli AR.	Juli Dekl.	Juli ☾ Glieder		August AR.	August Dekl.	August ☾ Glieder	
		—	in			—	in			—	in			—	in	
	18^h16^m	87°39′	0.01 s	0.01 ″	18^h16^m	87°39′	0.01 s	0.01 ″	18^h16^m	87°39′	0.01 s	0.01 ″	18^h16^m	87°39′	0.01 s	0.01 ″
	s	″			s	″			s	″			s	″		
1	20.14	31.37	+ 7	+ 7	34.37	37.95	+ 6	− 8	41.11	46.84	−19	− 6	39.00	55.80	−10	+10
2	20.69	31.53	+10	+ 3	34.71	38.21	− 1	−11	41.18	47.14	−22	− 1	38.79	56.06	0	+11
3	21.23	31.69	+11	− 1	35.05	38.47	− 8	−11	41.24	47.44	−20	+ 4	38.57	56.32	+ 9	+ 9
4	21.77	31.86	+ 9	− 6	35.38	38.73	−15	− 9	41.30	47.75	−14	+ 8	38.34	56.57	+17	+ 6
5	22.30	32.03	+ 4	− 9	35.70	39.00	−20	− 5	41.34	48.05	− 5	+11	38.10	56.82	+20	+ 1
6	22.83	32.20	− 3	−11	36.01	39.27	−21	+ 1	41.38	48.35	+ 5	+11	37.85	57.07	+20	− 4
7	23.35	32.38	−10	−10	36.32	39.55	−17	+ 6	41.40	48.65	+14	+ 8	37.59	57.32	+15	− 8
8	23.87	32.56	−16	− 7	36.62	39.82	− 9	+10	41.42	48.95	+20	+ 4	37.33	57.56	+ 8	−10
9	24.38	32.75	−19	− 3	36.91	40.10	0	+11	41.42	49.25	+22	− 1	37.06	57.80	+ 1	−10
10	24.89	32.94	−18	+ 3	37.19	40.38	+10	+10	41.42	49.55	+20	− 6	36.78	58.04	− 6	− 8
11	25.39	33.13	−13	+ 8	37.46	40.66	+18	+ 7	41.41	49.85	+14	− 9	36.49	58.27	−10	− 4
12	25.88	33.33	− 4	+11	37.72	40.94	+23	+ 2	41.39	50.15	+ 6	−11	36.20	58.50	−12	0
13	26.37	33.53	+ 6	+11	37.97	41.23	+22	− 3	41.36	50.44	− 1	− 9	35.90	58.73	−12	+ 4
14	26.85	33.73	+15	+ 9	38.22	41.51	+18	− 8	41.32	50.73	− 8	− 7	35.59	58.95	− 9	+ 8
15	27.33	33.94	+21	+ 5	38.46	41.80	+11	−10	41.27	51.03	−12	− 2	35.27	59.17	− 4	+10
16	27.80	34.15	+23	0	38.69	42.09	+ 3	−10	41.21	51.32	−13	+ 2	34.94	59.38	+ 2	+10
17	28.26	34.36	+21	− 5	38.91	42.38	− 4	− 8	41.14	51.62	−11	+ 6	34.61	59.59	+ 7	+ 8
18	28.72	34.58	+15	− 9	39.12	42.67	−10	− 5	41.06	51.91	− 7	+ 9	34.27	59.79	+11	+ 5
19	29.17	34.80	+ 7	−11	39.32	42.96	−13	− 1	40.97	52.20	− 2	+10	33.92	59.99	+13	+ 1
20	29.61	35.03	− 1	−10	39.51	43.25	−13	+ 3	40.87	52.49	+ 3	+ 9	33.57	60.19	+12	− 3
21	30.05	35.26	− 7	− 7	39.70	43.55	−10	+ 7	40.77	52.77	+ 8	+ 7	33.21	60.38	+ 9	− 7
22	30.48	35.49	−12	− 3	39.87	43.84	− 6	+ 9	40.65	53.06	+12	+ 4	32.85	60.57	+ 2	−10
23	30.90	35.72	−14	+ 1	40.04	44.14	− 1	+10	40.52	53.34	+13	0	32.48	60.76	− 5	−11
24	31.31	35.96	−13	+ 5	40.19	44.43	+ 5	+ 9	40.39	53.62	+11	− 5	32.10	60.94	−12	− 9
25	31.72	36.20	−10	+ 8	40.34	44.73	+ 9	+ 6	40.25	53.90	+ 6	− 8	31.71	61.12	−18	− 6
26	32.12	36.44	− 5	+10	40.48 40.61	45.03 45.33	+12 +12	+ 2 − 2	40.10	54.18	− 1	−11	31.32	61.29	−20	− 1
27	32.51	36.68	0	+10	40.73	45.63	+ 8	− 6	39.94	54.46	− 9	−10	30.92	61.46	−18	+ 5
28	32.90	36.93	+ 5	+ 8	40.84	45.93	+ 2	−10	39.77	54.73	−16	− 8	30.52	61.62	−12	+ 9
29	33.28	37.18	+ 9	+ 5	40.94	46.23	− 5	−11	39.59	55.00	−20	− 4	30.11	61.78	− 4	+11
30	33.66	37.43	+11	+ 1	41.03	46.53	−13	−10	39.40	55.27	−21	+ 2	29.69	61.93	+ 6	+10
31	34.02	37.69	+10	− 4	41.11	46.84	−19	− 6	39.20	55.54	−17	+ 6	29.27	62.08	+14	+ 7
32	34.37	37.95	+ 6	− 8					39.00	55.80	−10	+10	28.85	62.22	+19	+ 3

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 39′ 30″	24.475	−24.454	−87° 39′ 40″	24.504	−24.483	−87° 40′ 0″	24.562	−24.542
40	24.504	−24.483	50	24.533	−24.513	10	24.591	−24.571

$\alpha_{1933.0} = 18^h\ 15^m\ 43^s.17$ $\delta_{1933.0} = -87°\ 39'\ 38''.56$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sg) χ Octantis $5^{m}.22$

Tag	September AR.	September Dekl.	September ☾ Glieder		Oktober AR.	Oktober Dekl.	Oktober ☾ Glieder		November AR.	November Dekl.	November ☾ Glieder		Dezember AR	Dezember Dekl.	Dezember ☾ Glieder	
		—	in			—	in			—	in			—	in	
	$18^{h}16^{m}$	87°40′	0.01 s	0.01 ″	$18^{h}16^{m}$	87°40′	0.01 s	0.01 ″	$18^{h}15^{m}$	87°39′	0.01 s	0.01 ″	$18^{h}15^{m}$	87°39′	0.01 s	0.01 ″
	s	″			s	″			s	″			s	″		
1	28.85	2.22	+19	+3	14.56	3.91	+13	−9	60.50	60.10	−11	−5	52.77	52.01	−10	+6
2	28.42	2.36	+20	−2	14.07	3.88	+6	−11	60.12	59.89	−13	0	52.66	51.69	−6	+9
3	27.99	2.49	+17	−7	13.57	3.84	−2	−10	59.75	59.67	−13	+4	52.55	51.37	−1	+10
4	27.55	2.62	+10	−10	13.08	3.79	−8	−7	59.39	59.45	−10	+7	52.46	51.05	+4	+9
5	27.10	2.74	+3	−11	12.59	3.74	−12	−3	59.03	59.23	−5	+9	52.37	50.72	+9	+7
6	26.65	2.85	−4	−9	12.10	3.68	−13	+1	58.68	59.00	+1	+10	52.30	50.40	+11	+3
7	26.20	2.96	−10	−6	11.61	3.61	−12	+5	58.34	58.77	+6	+8	52.24	50.07	+12	−1
8	25.74	3.06	−13	−1	11.12	3.54	−8	+8	58.01	58.53	+10	+6	52.19	49.74	+9	−5
9	25.28	3.16	−13	+3	10.64	3.46	−3	+10	57.69	58.29	+12	+2	52.15	49.42	+4	−8
10	24.82	3.26	−10	+7	10.15	3.38	+2	+9	57.37	58.04	+11	−3	52.12	49.09	−3	−10
11	24.35	3.35	−6	+9	9.67	3.29	+7	+8	57.06	57.78	+8	−7	52.10	48.76	−10	−10
12	23.88	3.43	−1	+10	9.19	3.19	+11	+4	56.76	57.52	+2	−9	52.10	48.43	−17	−8
13	23.41	3.51	+5	+9	8.71	3.09	+12	0	56.46	57.26	−5	−10	52.10	48.09	−21	−4
14	22.93	3.58	+9	+7	8.24	2.98	+11	−4	56.18	57.00	−12	−9	52.12	47.76	−21	+2
15	22.45	3.65	+12	+3	7.77	2.87	+6	−8	55.91	56.73	−18	−6	52.14	47.42	−17	+6
16	21.97	3.71	+12	−2	7.30	2.75	0	−10	55.64	56.46	−20	−1	52.17	47.09	−10	+10
17	21.48	3.76	+10	−6	6.84	2.63	−7	−10	55.38	56.18	−19	+4	52.22	46.75	0	+11
18	21.00	3.81	+5	−9	6.39	2.50	−14	−8	55.13	55.90	−13	+8	52.28	46.41	+10	+9
19	20.51	3.85	−2	−11	5.94	2.36	−18	−5	54.89	55.62	−4	+11	52.34	46.08	+18	+6
20	20.02	3.89	−9	−10	5.49	2.22	−19	+1	54.66	55.34	+6	+11	52.42	45.74	+22	+1
21	19.53	3.92	−15	−7	5.04	2.07	−16	+6	54.44	55.05	+14	+8	52.51	45.40	+21	−4
22	19.04	3.95	−19	−2	4.60	1.92	−9	+9	54.23	54.76	+20	+4	52.61	45.07	+16	−8
23	18.54	3.97	−19	+3	4.17	1.76	0	+11	54.03	54.46	+22	−1	52.72	44.73	+9	−11
24	18.04	3.98	−14	+7	3.74	1.60	+9	+10	53.84	54.16	+19	−6	52.85	44.40	+1	−10
25	17.54	3.99	−6	+10	3.31	1.43	+17	+7	53.65	53.86	+13	−10	*)52.98	44.07	−6	−8
26	17.05	3.99	+3	+11	2.89	1.25	+21	+2	53.48	53.56	+5	−11	53.12	43.73	−10	−4
27	16.55	3.98	+12	+9	2.48	1.07	+21	−4	53.32	53.26	−3	−9	53.27	43.40	−12	+1
28	16.05	3.97	+18	+5	2.07	0.89	+16	−8	53.17	52.95	−9	−6	53.43	43.07	−11	+5
29	15.56	3.96	+20	0	1.67	0.70	+9	−10	53.03	52.64	−12	−2	53.60	42.73	−7	+8
30	15.06	3.94	+18	−5	1.28	0.50	+1	−10	52.90	52.33	−13	+2	53.78	42.40	−2	+10
31	14.56	3.91	+13	−9	0.89	0.30	−6	−8	52.77	52.01	−10	+6	53.97	42.07	+3	+10
32					0.50	0.10	−11	−5					54.17	41.74	+8	+8

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 39′ 40″	24.504	−24.483	−87° 39′ 50″	24.533	−24.513	−87° 40′ 0″	24.562	−24.542
50	24.533	−24.513	60	24.562	−24.542	10	24.591	−24.571

$\alpha_{1933.0} = 18^{h}\ 15^{m}\ 43^{s}.17$ $\delta_{1933.0} = -87°\ 39'\ 38''.56$

*) Tag der doppelten unteren Kulmination: Dez. 25

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sh) σ Octantis $5^{m}.48$

Tag	Januar				Februar				März				April			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
		—	in			—	in			—	in			—	in	
	$19^h 50^m$	89° 11′	0.01 s	0.01 ″	$19^h 51^m$	89° 11′	0.01 s	0.01 ″	$19^h 51^m$	89° 10′	0.01 s	0.01 ″	$19^h 52^m$	89° 10′	0.01 s	0.01 ″
	s	″			s	″			s	″			s	″		
1	49.60	25.48	+55	− 5	0.68	14.46	−16	− 7	31.44	65.77	−28	− 6	20.43	59.39	−36	+ 7
2	49.53	25.13	+39	− 8	1.48	14.12	−32	− 4	32.82	65.50	−40	− 2	22.16	59.25	−23	+ 9
3	49.49	24.77	+18	− 9	2.30	13.78	−41	− 1	34.22	65.24	−44	+ 2	23.90	59.12	− 6	+ 9
4	49.47	24.41	− 4	− 8	3.14	13.44	−43	+ 3	35.64	64.98	−41	+ 5	25.64	59.00	+11	+ 7
5	49.49	24.06	−23	− 6	4.01	13.10	−37	+ 6	37.08	64.72	−31	+ 8	27.38	58.88	+25	+ 4
6	49.53	23.70	−36	− 3	4.90	12.76	−26	+ 9	38.53	64.47	−16	+ 9	29.13	58.76	+34	0
7	49.61	23.34	−43	+ 1	5.81	12.43	− 9	+ 9	39.99	64.22	+ 1	+ 8	30.88	58.65	+34	− 5
8	49.72	22.99	−42	+ 4	6.75	12.10	+10	+ 8	41.47	63.98	+19	+ 6	32.64	58.54	+25	− 9
9	49.86	22.63	−34	+ 7	7.72	11.77	+26	+ 5	42.96	63.74	+32	+ 3	34.40	58.44	+ 8	−11
10	50.03	22.27	−19	+ 9	8.71	11.45	+36	+ 1	44.46	63.50	+38	− 2	36.16	58.34	−13	−11
11	50.22	21.92	− 2	+ 9	9.72	11.12	+39	− 4	45.98	63.27	+34	− 6	37.93	58.25	−32	− 9
12	50.43	21.56	+16	+ 7	10.75	10.80	+31	− 8	47.51	63.04	+21	−10	39.69	58.16	−46	− 4
13	50.68	21.20	+31	+ 4	11.80	10.48	+14	−11	49.06	62.82	+ 2	−11	41.46	58.08	−48	+ 1
14	50.96	20.84	+38	− 1	12.88	10.17	− 7	−11	50.62	62.60	−19	−10	43.23	58.00	−39	+ 7
15	51.26	20.48	+35	− 6	13.97	9.85	−29	− 9	52.19	62.39	−38	− 7	45.00	57.93	−20	+10
16	51.59	20.12	+23	− 9	15.09	9.54	−45	− 5	53.78	62.18	−48	− 2	46.78	57.86	+ 5	+12
17	51.95	19.76	+ 3	−11	16.23	9.23	−51	0	55.37	61.97	−47	+ 3	48.55	57.79	+30	+11
18	*)52.34	19.40	−19	−11	17.39	8.92	−45	+ 5	56.98	61.77	−34	+ 8	50.32	57.73	+50	+ 7
19	52.76	19.04	−40	− 8	18.57	8.62	−29	+ 9	58.60	61.57	−13	+11	52.09	57.68	+60	+ 2
20	53.21	18.68	−52	− 3	19.78	8.32	− 4	+11	60.23	61.38	+13	+11	53.86	57.63	+58	− 3
21	53.68	18.33	−53	+ 2	21.00	8.02	+21	+11	61.86	61.19	+36	+ 9	55.63	57.59	+47	− 7
22	54.19	17.97	−42	+ 7	22.24	7.73	+42	+ 8	63.51	61.00	+52	+ 5	57.40	57.55	+28	− 9
23	54.72	17.61	−20	+11	23.50	7.44	+55	+ 3	65.16	60.82	+58	0	59.16	57.52	+ 5	− 9
24	55.28	17.25	+ 6	+11	24.78	7.15	+55	− 2	66.83	60.64	+51	− 4	60.92	57.49	−15	− 8
25	55.86	16.90	+31	+10	26.07	6.87	+48	− 6	68.50	60.47	+38	− 8	62.68	57.47	−32	− 5
26	56.47	16.55	+49	+ 6	27.39	6.59	+31	− 9	70.19	60.30	+18	− 9	64.44	57.45	−41	− 1
27	57.10	16.20	+58	+ 1	28.72	6.31	+10	− 9	71.88	60.14	− 3	− 9	66.20	57.43	−43	+ 3
28	57.76	15.85	+55	− 3	30.07	6.04	−11	− 8	73.57	59.98	−23	− 7	67.95	57.42	−39	+ 6
29	58.45	15.50	+44	− 7	31.44	5.77	−28	− 6	75.28	59.82	−37	− 3	69.70	57.42	−27	+ 8
30	59.17	15.15	+25	− 9					76.99	59.67	−44	+ 1	71.44	57.42	−12	+ 9
31	59.91	14.81	+ 3	− 9					78.71	59.53	−43	+ 4	73.18	57.43	+ 5	+ 8
32	60.68	14.46	−16	− 7					80.43	59.39	−36	+ 7				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−89° 10′ 50″	69.923	−69.915	−89° 11′ 0″	70.160	−70.153	−89° 11′ 20″	70.641	−70.634
60	70.160	−70.153	10	70.400	−70.393	30	70.884	−70.877

$\alpha_{1933.0} = 19^h\ 51^m\ 52^s.74$ $\delta_{1933.0} = -89°\ 11'\ 13''.11$

*) Tag der doppelten unteren Kulmination: Jan. 18

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sh) σ Octantis $5^{m}.48$

Tag	Mai AR.	Mai Dekl.	Mai ☾ Glieder in 0.01s	Mai ☾ Glieder in 0.01″	Juni AR.	Juni Dekl.	Juni ☾ Glieder in 0.01s	Juni ☾ Glieder in 0.01″	Juli AR.	Juli Dekl.	Juli ☾ Glieder in 0.01s	Juli ☾ Glieder in 0.01″	August AR.	August Dekl.	August ☾ Glieder in 0.01s	August ☾ Glieder in 0.01″
	19^h53^m s	−89°10′ ″			19^h54^m s	−89°11′ ″			19^h54^m s	−89°11′ ″			19^h54^m s	−89°11′ ″		
1	13.18	57.43	+5	+8	2.75	0.00	+29	−6	36.53	6.32	−14	−12	48.99	15.43	−43	+7
2	14.91	57.44	+20	+5	4.15	0.16	+17	−10	37.32	6.58	−36	−10	48.94	15.72	−20	+10
3	16.64	57.46	+30	+1	5.53	0.32	−1	−12	38.08	6.84	−52	−6	48.85	16.02	+7	+11
4	18.36	57.48	+33	−3	6.90	0.48	−23	−11	38.82	7.11	−57	−1	48.74	16.31	+32	+9
5	20.07	57.51	+27	−8	8.25	0.65	−42	−9	39.54	7.37	−50	+5	48.60	16.61	+50	+5
6	21.78	57.54	+12	−11	9.58	0.82	−53	−4	40.23	7.64	−33	+9	48.44	16.90	+58	0
7	23.48	57.57	−7	−12	10.90	1.00	−53	+2	40.90	7.91	−7	+11	48.24	17.19	+54	−4
8	25.18	57.61	−28	−10	12.20	1.18	−41	+7	41.54	8.18	+21	+11	48.02	17.49	+40	−8
9	26.87	57.66	−44	−6	13.48	1.36	−19	+10	42.16	8.46	+44	+8	47.77	17.78	+20	−9
10	28.54	57.71	−52	−1	14.74	1.55	+8	+12	42.75	8.73	+58	+3	47.50	18.07	−1	−8
11	30.21	57.77	−47	+4	15.98	1.74	+34	+10	43.32	9.01	+61	−1	47.20	18.36	−20	−6
12	31.88	57.83	−30	+9	17.21	1.94	+54	+6	43.86	9.29	+52	−6	46.86	18.65	−33	−2
13	33.53	57.89	−6	+12	18.42	2.14	+63	+2	44.37	9.57	+35	−8	46.50	18.93	−38	+1
14	35.17	57.96	+21	+12	19.60	2.34	+60	−3	44.86	9.86	+13	−9	46.12	19.22	−36	+5
15	36.81	58.03	+44	+9	20.77	2.55	+46	−7	45.32	10.14	−8	−8	45.70	19.50	−28	+8
16	38.43	58.11	+59	+5	21.91	2.76	+27	−9	45.75	10.43	−25	−5	45.26	19.78	−14	+9
17	40.05	58.19	+62	0	23.04	2.98	+4	−9	46.16	10.72	−36	−1	44.79	20.06	+2	+9
18	41.65	58.28	+54	−5	24.15	3.20	−16	−7	46.54	11.01	−39	+3	44.30	20.33	+18	+7
19	43.24	58.37	+38	−8	25.23	3.42	−31	−3	46.89	11.30	−34	+6	43.78	20.61	+30	+4
20	44.82	58.47	+16	−9	26.30	3.64	−39	0	47.22	11.60	−24	+9	43.24	20.88	+37	0
21	46.39	58.57	−6	−8	27.34	3.87	−39	+4	47.52 47.80	11.89 12.18	−9 +8	+9 +8	42.67	21.15	+35	−5
22	47.95	58.68	−24	−6	28.36	4.10	−32	+7	48.05	12.47	+23	+6	42.07	21.42	+25	−9
23	49.49	58.79	−37	−2	29.36	4.33	−20	+9	48.27	12.77	+33	+2	41.45	21.68	+7	−11
24	51.02	58.91	−42	+2	30.33	4.57	−4	+9	48.46	13.06	+36	−2	40.80	21.95	−14	−11
25	52.54	59.03	−39	+5	31.29	4.81	+12	+8	48.62	13.36	+31	−7	40.13	22.21	−35	−9
26	54.04	59.16	−30	+8	32.22	5.05	+25	+5	48.76	13.65	+17	−10	39.43	22.47	−50	−5
27	55.53	59.29	−17	+9	33.13	5.30	+33	0	48.87	13.95	−4	−11	38.71	22.72	−54	0
28	57.00	59.42	−1	+9	34.02	5.55	+33	−4	48.95	14.24	−26	−10	37.96	22.97	−47	+6
29	58.46	59.56	+15	+6	34.88	5.80	+24	−8	49.00	14.54	−45	−8	37.19	23.22	−29	+9
30	59.91	59.70	+27	+3	35.72	6.06	+7	−11	49.02	14.83	−56	−3	36.39	23.47	−4	+11
31	61.34	59.85	+33	−2	36.53	6.32	−14	−12	49.02	15.13	−55	+2	35.57	23.71	+22	+10
32	62.75	60.00	+29	−6					48.99	15.43	−43	+7	34.73	23.95	+43	+7

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−89° 10′ 50″	69.923	−69.915	−89° 11′ 0″	70.160	−70.153	−89° 11′ 20″	70.641	−70.634
60	70.160	−70.153	10	70.400	−70.393	30	70.884	−70.877

$\alpha_{1933.0} = 19^h\ 51^m\ 52^s.74$ $\delta_{1933.0} = -89°\ 11'\ 13''.11$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sh) σ Octantis $5^{m}.48$

Tag	September AR.	September Dekl.	September ☾ Glieder in 0.01 s	September ☾ Glieder in 0.01 "	Oktober AR.	Oktober Dekl.	Oktober ☾ Glieder in 0.01 s	Oktober ☾ Glieder in 0.01 "	November AR.	November Dekl.	November ☾ Glieder in 0.01 s	November ☾ Glieder in 0.01 "	Dezember AR.	Dezember Dekl.	Dezember ☾ Glieder in 0.01 s	Dezember ☾ Glieder in 0.01 "
	19^h54^m s	—89°11′ "			19^h53^m s	—89°11′ "			19^h52^m s	—89°11′ "			19^h52^m s	—89°11′ "		
1	34.73	23.95	+43	+ 7	60.27	29.15	+50	− 5	75.35	29.21	−19	− 7	38.62	23.74	−38	+ 4
2	33.86	24.19	+55	+ 2	58.88	29.24	+33	− 8	73.93	29.11	−34	− 3	37.68	23.48	−32	+ 7
3	32.97	24.42	+55	− 3	57.49	29.33	+12	− 9	72.52	29.01	−40	+ 1	36.77	23.21	−20	+ 9
4	32.06	24.65	+45	− 7	56.09	29.41	− 9	− 8	71.12	28.90	−38	+ 5	35.88	22.94	− 5	+ 9
5	31.13	24.88	+27	− 9	54.68	29.49	−26	− 5	69.72	28.78	−29	+ 8	35.01	22.67	+10	+ 8
6	30.17	25.10	+ 5	− 9	53.26	29.56	−37	− 1	68.34	28.66	−16	+ 9	34.17	22.39	+23	+ 5
7	29.19	25.32	−15	− 7	51.83	29.62	−40	+ 3	66.96	28.53	− 1	+ 9	33.35	22.11	+31	+ 1
8	28.19	25.53	−30	− 4	50.39	29.68	−36	+ 6	65.60	28.39	+14	+ 7	32.56	21.82	+32	− 3
9	27.17	25.74	−38	0	48.95	29.73	−25	+ 8	64.25	28.25	+26	+ 4	31.79	21.53	+26	− 7
10	26.13	25.94	−38	+ 4	47.50	29.78	−11	+ 9	62.91	28.10	+32	0	31.05	21.23	+12	−10
11	25.07	26.14	−32	+ 7	46.05	29.82	+ 5	+ 9	61.59	27.95	+31	− 4	30.33	20.93	− 8	−11
12	23.99	26.34	−20	+ 9	44.59	29.85	+20	+ 6	60.28	27.79	+22	− 8	29.64	20.63	−29	−11
13	22.89	26.53	− 4	+ 9	43.13	29.88	+30	+ 2	58.98	27.63	+ 6	−11	28.98	20.32	−47	− 8
14	21.77	26.72	+12	+ 8	41.67	29.90	+35	− 2	57.70	27.46	−14	−11	28.34	20.01	−57	− 3
15	20.63	26.90	+25	+ 5	40.20	29.91	+31	− 6	56.43	27.28	−34	−10	27.73	19.70	−55	+ 2
16	19.47	27.08	+35	+ 1	38.73	29.92	+20	− 9	55.18	27.10	−49	− 6	27.15	19.38	−42	+ 7
17	18.30	27.25	+36	− 3	37.26	29.92	+ 2	−11	53.95	26.91	−54	0	26.60	19.06	−19	+10
18	17.11	27.42	+30	− 7	35.79	29.92	−19	−11	52.73	26.72	−47	+ 5	26.07	18.74	+ 9	+11
19	15.91	27.59	+15	−10	34.31	29.91	−38	− 8	51.53	26.52	−30	+ 9	25.57	18.41	+35	+ 9
20	14.69	27.75	− 5	−11	32.83	29.89	−50	− 3	50.35	26.32	− 6	+11	25.10	18.09	+54	+ 5
21	13.45	27.90	−26	−10	31.36	29.87	−51	+ 2	49.18	26.11	+22	+11	24.65	17.76	+61	0
22	12.19	28.05	−44	− 7	29.89	29.84	−40	+ 7	48.04	25.90	+44	+ 8	24.24	17.42	+57	− 4
23	10.92	28.19	−52	− 1	28.42	29.81	−20	+10	46.91	25.68	+59	+ 3	23.85	17.09	+43	− 8
24	9.63	28.33	−49	+ 4	26.95	29.77	+ 5	+11	45.80	25.45	+60	− 1	23.49	16.75	+22	− 9
25	8.33	28.46	−35	+ 8	25.48	29.72	+31	+10	44.71	25.22	+51	− 6	23.16	16.41	− 1	− 8
26	7.01	28.59	−12	+11	24.02	29.67	+50	+ 6	43.65	24.99	+33	− 9	22.85	16.07	−20	− 5
27	5.69	28.71	+14	+11	22.56	29.61	+59	+ 1	42.60	24.75	+11	− 9	22.58	15.73	−33	− 2
28	4.35	28.83	+37	+ 8	21.11	29.54	+55	− 4	41.57	24.51	−11	− 8	22.33	15.38	−36	+ 2
29	3.00	28.94	+52	+ 4	19.66	29.47	+42	− 8	40.56	24.26	−27	− 4	22.11	15.03	−33	+ 6
30	1.64	29.05	+56	− 1	18.22	29.39	+22	− 9	39.58	24.00	−37	0	21.93	14.69	−23	+ 9
31	0.27	29.15	+50	− 5	16.78	29.30	0	− 9	38.62	23.74	−38	+ 4	21.77	14.34	− 9	+10
32					15.35	29.21	−19	− 7					21.65	13.98	+ 6	+ 9

δ	sec δ	tg δ	δ	sec δ	tg δ
−89° 11′ 10″	70.400	−70.393	−89° 11′ 20″	70.641	−70.634
20	70.641	−70.634	30	70.884	−70.877

$\alpha_{1933.0} = 19^h\ 51^m\ 52^s.74$ $\delta_{1933.0} = -89°\ 11'\ 13''.11$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Si) β Octantis $4^m.34$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder		Februar AR.	Februar Dekl.	Februar ☾ Glieder		März AR.	März Dekl.	März ☾ Glieder		April AR.	April Dekl.	April ☾ Glieder	
		—	in			—	in			—	in			—	in	
	22^h39^m	$81°44'$	$0^s.01$	$0''.01$	22^h39^m	$81°44'$	$0^s.01$	$0''.01$	22^h39^m	$81°43'$	$0^s.01$	$0''.01$	22^h39^m	$81°43'$	$0^s.01$	$0''.01$
	s	"			s	"			s	"			s	"		
1	18.98	19.91	+7	+4	16.66	10.80	0	−8	16.44	60.37	−2	−8	18.28	48.83	−5	+1
2	18.88	19.68	+6	−1	16.62	10.45	−2	−8	*)16.47	59.98	−4	−7	18.37	48.48	−4	+3
3	18.78	19.45	+4	−5	16.58	10.10	−4	−6	16.50	59.60	−5	−4	18.46	48.13	−2	+6
4	18.68	19.21	+1	−7	16.55	9.75	−5	−3	16.53	59.22	−5	−1	18.56	47.79	0	+7
5	18.58	18.96	−1	−8	16.52	9.39	−5	0	16.56	58.83	−5	+2	18.66	47.45	+2	+6
6	18.48	18.71	−3	−7	16.49	9.03	−4	+3	16.59	58.45	−4	+5	18.75	47.11	+4	+4
7	18.38	18.46	−5	−5	16.46	8.67	−3	+6	16.63	58.07	−2	+7	18.85	46.78	+5	+1
8	18.29	18.20	−5	−2	16.43	8.31	−1	+7	16.67	57.68	+1	+7	18.96	46.45	+5	−4
9	18.20	17.94	−5	+1	16.41	7.94	+2	+7	16.71	57.30	+3	+6	19.07	46.12	+3	−8
10	18.11	17.67	−4	+4	16.39	7.58	+4	+6	16.75	56.91	+4	+3	19.18	45.79	+1	−10
11	18.02	17.40	−2	+7	16.37	7.21	+5	+2	16.80	56.53	+5	0	19.29	45.47	−1	−11
12	17.94	17.12	0	+7	16.35	6.84	+5	−2	16.85	56.15	+4	−5	19.40	45.15	−4	−9
13	17.86	16.84	+2	+7	16.34	6.47	+4	−6	16.90	55.77	+3	−8	19.52	44.83	−5	−5
14	17.78	16.55	+4	+4	16.33	6.09	+2	−10	16.96	55.40	0	−10	19.63	44.52	−5	0
15	17.70	16.26	+5	0	16.32	5.72	−1	−11	17.01	55.02	−2	−10	19.74	44.21	−4	+5
16	17.62	15.97	+4	−4	16.31	5.34	−3	−10	17.07	54.64	−5	−8	19.86	43.91	−2	+10
17	17.54	15.67	+3	−8	16.31	4.96	−5	−7	17.13	54.27	−6	−3	19.98	43.61	+1	+12
18	17.47	15.37	+1	−11	16.30	4.59	−6	−2	17.19	53.89	−5	+2	20.10	43.31	+3	+12
19	17.40	15.07	−2	−11	16.30	4.21	−5	+4	17.25	53.52	−4	+7	20.22	43.01	+5	+10
20	17.33	14.76	−5	−9	16.30	3.83	−3	+8	17.32	53.15	−1	+11	20.35	42.72	+6	+6
21	17.26	14.45	−6	−5	16.31	3.45	0	+11	17.39	52.78	+2	+12	20.48	42.43	+6	+1
22	17.20	14.13	−6	0	16.32	3.06	+3	+11	17.46	52.41	+4	+11	20.60	42.15	+5	−3
23	17.14	13.81	−4	+5	16.33	2.68	+5	+10	17.53	52.04	+6	+8	20.73	41.87	+2	−6
24	17.08	13.49	−2	+10	16.34	2.30	+6	+6	17.61	51.68	+6	+3	20.86	41.59	0	−8
25	17.02	13.17	+1	+12	16.35	1.91	+6	+2	17.68	51.31	+6	−1	20.99	41.31	−2	−8
26	16.96	12.84	+4	+11	16.37	1.53	+5	−3	17.76	50.95	+4	−5	21.12	41.04	−4	−6
27	16.90	12.51	+6	+9	16.39	1.14	+3	−6	17.84	50.59	+2	−7	21.25	40.77	−5	−4
28	16.85	12.17	+6	+5	16.41	0.75	+1	−8	17.92	50.23	−1	−8	21.39	40.51	−5	0
29	16.80	11.83	+6	0	16.44	0.37	−2	−8	18.01	49.88	−3	−7	21.52	40.25	−5	+3
30	16.75	11.49	+4	−4					18.09	49.53	−5	−5	21.66	40.00	−3	+5
31	16.70	11.15	+2	−6					18.18	49.18	−5	−3	21.80	39.75	−1	+6
32	16.66	10.80	0	−8					18.28	48.83	−5	+1				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−81° 43′ 30″	6.948	−6.876	−81° 43′ 50″	6.953	−6.880	−81° 44′ 10″	6.957	−6.885
40	6.950	−6.878	60	6.955	−6.883	20	6.960	−6.888

$\alpha_{1933.0} = 22^h\ 39^m\ 19^s.48$ $\delta_{1933.0} = -81°\ 44'\ 1''.70$

*) Tag der doppelten unteren Kulmination: März 2

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Si) β Octantis $4^{m}.34$

Tag	Mai			Juni			Juli			August		
	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder	AR.	Dekl.	☾ Glieder
	$22^h 39^m$ s	$-81° 43'$ ″	in 0.01s 0.01″	$22^h 39^m$ s	$-81° 43'$ ″	in 0.01s 0.01″	$22^h 39^m$ s	$-81° 43'$ ″	in 0.01s 0.01″	$22^h 39^m$ s	$-81° 43'$ ″	in 0.01s 0.01″
1	21.80	39.75	−1 +6	26.57	34.30	+4 −1	31.35	33.79	+1 −11	35.27	38.16	−6 −5
2	21.94	39.50	+1 +6	26.74	34.20	+4 −5	31.49	33.86	−1 −13	35.37	38.37	−6 0
3	22.09	39.26	+3 +5	26.90	34.11	+2 −9	31.64	33.93	−4 −11	35.47	38.58	−4 +5
4	22.23	39.02	+4 +2	27.06	34.03	0 −12	31.79	34.01	−6 −8	35.56	38.80	−2 +9
5	22.37	38.79	+4 −2	27.23	33.95	−2 −12	31.93	34.09	−6 −3	35.65	39.02	+1 +11
6	22.52	38.56	+4 −7	27.39	33.87	−5 −10	32.08	34.18	−5 +3	35.74	39.25	+4 +10
7	22.66	38.34	+2 −10	27.55	33.80	−6 −5	32.22	34.27	−3 +8	35.83	39.48	+6 +8
8	22.81	38.12	0 −12	27.71	33.74	−6 0	32.36	34.37	0 +11	35.91	39.71	+6 +4
9	22.96	37.90	−3 −11	27.87	33.68	−4 +6	32.50	34.47	+3 +12	35.99	39.95	+6 −1
10	23.11	37.69	−5 −8	28.04	33.63	−2 +10	32.64	34.58	+5 +10	36.07	40.19	+4 −4
11	23.26	37.48	−6 −3	28.20	33.58	+1 +12	32.77	34.69	+6 +7	36.15	40.43	+2 −7
12	23.41	37.28	−5 +3	28.36	33.54	+4 +12	32.91	34.81	+6 +2	36.22	40.68	−1 −7
13	23.56	37.08	−3 +8	28.53	33.50	+6 +9	33.04	34.93	+5 −2	36.29	40.93	−3 −6
14	23.71	36.89	0 +12	28.69	33.47	+7 +5	33.18	35.06	+3 −5	36.36	41.18	−4 −4
15	23.87	36.70	+2 +13	28.85	33.45	+6 +1	33.31	35.19	+1 −7	36.43	41.43	−5 −1
16	24.03	36.52	+5 +11	29.01	33.43	+5 −3	33.44	35.33	−2 −7	36.49	41.69	−5 +2
17	24.18	36.35	+6 +8	29.17	33.41	+2 −6	33.57	35.47	−3 −5	36.55	41.95	−4 +5
18	24.34	36.18	+6 +3	29.33	33.40	0 −7	33.70	35.62	−5 −3	36.61	42.21	−2 +7
19	24.50	36.01	+6 −1	29.49	33.40	−2 −7	33.83	35.77	−5 0	36.67	42.48	0 +8
20	24.66	35.85	+4 −5	29.64	33.40	−4 −5	33.95	35.93	−4 +3	36.72	42.75	+2 +7
21	24.81	35.69	+1 −7	29.80	33.41	−5 −2	34.07	36.09	−3 +6	36.77	43.02	+4 +5
22	24.97	35.54	−1 −8	29.96	33.43	−5 +1	34.19	36.26	−1 +7	36.82	43.29	+5 +1
23	25.13	35.39	−3 −6	30.12	33.45	−4 +4	34.31	36.43	+1 +7	36.86	43.56	+5 −3
24	25.29	35.25	−5 −4	30.27	33.47	−2 +6	34.42	36.60	+3 +6	36.90	43.83	+3 −7
25	25.45	35.11	−5 −1	30.43	33.50	0 +7	34.54	36.78	+4 +3	36.94	44.11	+1 −11
26	25.61	34.98	−5 +2	30.58	33.53	+2 +7	34.65	36.96	+5 −1	36.98	44.39	−2 −12
27	25.77	34.85	−4 +4	30.74	33.57	+3 +5	34.76	37.15	+4 −6	37.02	44.67	−4 −10
28	25.93	34.73	−2 +6	30.90	33.62	+4 +1	34.87	37.34	+2 −9	37.05	44.96	−6 −7
29	26.09	34.61	0 +7	31.05	33.67	+4 −3	34.97	37.54	0 −12	37.08	45.24	−6 −2
30	26.25	34.50	+2 +6	31.20	33.73	+3 −8	35.07	37.74	−3 −12	37.10	45.52	−5 +3
31	26.41	34.40	+4 +3	31.35	33.79	+1 −11	35.17	37.95	−5 −10	37.12	45.81	−3 +8
32	26.57	34.30	+4 −1				35.27	38.16	−6 −5	37.14 37.16	46.10 46.39	0 +11 +3 +11

δ	sec δ	tg δ	δ	sec δ	tg δ
−81° 43′ 30″	6.948	−6.876	−81° 43′ 40″	6.950	−6.878
40	6.950	−6.878	50	6.953	−6.880

$\alpha_{1933.0} = 22^h\ 39^m\ 19^s.48$ $\qquad\delta_{1933.0} = -81°\ 44'\ 1''.70$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

81) β Octantis $4^m.34$

Tag	September AR.	September Dekl.	September ☾ Glieder	Oktober AR.	Oktober Dekl.	Oktober ☾ Glieder	November AR.	November Dekl.	November ☾ Glieder	Dezember AR.	Dezember Dekl.	Dezember ☾ Glieder
	$22^h 39^m$	— 81° 43′	in $0.^s01$ $0.''01$	$22^h 39^m$	— 81° 43′	in $0.^s01$ $0.''01$	$22^h 39^m$	— 81° 44′	in $0.^s01$ $0.''01$	$22^h 39^m$	— 81° 43′	in $0.^s01$ $0.''01$
1	{ 37.14 / 37.16	46.10 / 46.39	0 +11 / +3 +11 }	36.38	54.98	+6 + 2	33.29	1.48	−1 − 8	29.17	63.01	−5 − 2
2	37.18	46.68	+5 + 9	36.31	55.24	+5 − 2	33.17	1.62	−3 − 7	29.03	62.97	−5 + 1
3	37.19	46.97	+6 + 5	36.24	55.50	+3 − 5	33.04	1.75	−4 − 4	28.89	62.92	−4 + 4
4	37.20	47.26	+6 0	36.17	55.76	+1 − 7	32.91	1.88	−5 − 1	28.75	62.86	−3 + 6
5	37.21	47.55	+5 − 3	36.10	56.02	−2 − 7	32.78	2.00	−5 + 2	28.62	62.80	−1 + 7
6	37.21	47.84	+2 − 6	36.02	56.27	−3 − 6	32.65	2.11	−4 + 5	28.48	62.73	+1 + 7
7	37.21	48.14	0 − 7	35.93	56.52	−5 − 3	32.52	2.22	−2 + 7	28.34	62.65	+3 + 5
8	37.21	48.43	−2 − 7	35.85	56.77	−5 0	32.38	2.32	0 + 7	28.21	62.56	+4 + 2
9	37.20	48.72	−4 − 5	35.77	57.01	−4 + 3	32.25	2.42	+2 + 6	28.07	62.47	+4 − 2
10	37.19	49.01	−5 − 2	35.68	57.25	−3 + 6	32.12	2.51	+3 + 4	27.93	62.38	+3 − 6
11	37.18	49.31	−5 + 1	35.59	57.49	−1 + 7	31.98	2.60	+4 + 1	27.80	62.28	+2 −10
12	37.17	49.60	−4 + 4	35.51	57.72	+1 + 7	31.84	2.68	+4 − 4	27.66	62.17	0 −12
13	37.15	49.90	−2 + 6	35.42	57.95	+3 + 6	31.70	2.75	+3 − 8	27.53	62.06	−3 −12
14	37.13	50.19	0 + 7	35.32	58.17	+4 + 3	31.56	2.82	+1 −11	27.40	61.94	−5 −10
15	37.11	50.48	+1 + 7	35.22	58.39	+4 0	31.42	2.88	−1 −12	27.27	61.81	−6 − 5
16	37.08	50.77	+3 + 5	35.12	58.61	+4 − 5	31.28	2.93	−4 −11	27.14	61.68	−6 0
17	37.05	51.06	+4 + 2	35.02	58.82	+3 − 8	31.14	2.98	−5 − 7	27.01	61.54	−4 + 5
18	37.02	51.35	+5 − 2	34.92	59.03	+1 −11	31.00	3.02	−6 − 2	26.88	61.40	−2 +10
19	36.99	51.64	+4 − 6	34.81	59.24	−2 −11	30.86	3.06	−5 + 3	26.75	61.25	+1 +12
20	36.95	51.93	+2 − 9	34.71	59.44	−4 − 9	30.72	3.09	−3 + 8	26.63	61.09	+4 +11
21	36.91	52.21	0 −11	34.60	59.64	−6 − 5	30.58	3.12	0 +11	26.51	60.93	+6 + 8
22	36.87	52.49	−3 −11	34.49	59.83	−6 0	30.44	3.14	+3 +12	26.38	60.76	+7 + 4
23	36.83	52.78	−5 − 8	34.38	60.02	−4 + 5	30.30	3.15	+5 +11	26.26	60.59	+6 0
24	36.78	53.06	−6 − 3	34.26	60.20	−2 + 9	30.16	3.15	+6 + 7	26.14	60.41	+4 − 4
25	36.73	53.34	−5 + 2	34.15	60.38	+1 +12	30.02	3.15	+6 + 2	26.02	60.23	+2 − 6
26	36.68	53.62	−4 + 7	34.03	60.55	+4 +11	29.87	3.14	+5 − 2	25.90	60.04	−1 − 7
27	36.63	53.90	−1 +10	33.91	60.72	+6 + 9	29.73	3.13	+3 − 6	25.79	59.84	−3 − 5
28	36.57	54.17	+2 +11	33.79	60.88	+6 + 4	29.59	3.11	0 − 7	25.68	59.64	−4 − 3
29	36.51	54.44	+4 +10	33.66	61.04	+6 0	29.45	3.08	−2 − 7	25.56	59.43	−5 0
30	36.45	54.71	+6 + 7	33.54	61.19	+4 − 4	29.31	3.05	−4 − 5	25.45	59.22	−4 + 3
31	36.38	54.98	+6 + 2	33.42	61.34	+2 − 7	29.17	3.01	−5 − 2	25.34	59.00	−3 + 6
32				33.29	61.48	−1 − 8				25.23	58.78	−1 + 8

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−81° 43′ 40″	6.950	−6.878	−81° 43′ 50″	6.953	−6.880	−81° 44′ 0″	6.955	−6.883
50	6.953	−6.880	60	6.955	−6.883	10	6.957	−6.885

$\alpha_{1933.0} = 22^h\ 39^m\ 19^s.48$ $\delta_{1933.0} = -81°\ 44'\ 1''.70$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sk) τ Octantis $5^{m}.56$

Tag	Januar AR.	Januar Dekl.	Januar ☾ Glieder		Februar AR.	Februar Dekl.	Februar ☾ Glieder		März AR.	März Dekl.	März ☾ Glieder		April AR.	April Dekl.	April ☾ Glieder	
		—	in			—	in			—	in			—	in	
	$23^h 18^m$	$87° 51'$	$0^s.01$	$0''.01$	$23^h 18^m$	$87° 51'$	$0^s.01$	$0''.01$	$23^h 18^m$	$87° 50'$	$0^s.01$	$0''.01$	$23^h 18^m$	$87° 50'$	$0^s.01$	$0''.01$
	s	"			s	"			s	"			s	"		
1	48.60	21.16	+21	+ 5	35.94	12.67	+ 4	− 7	31.16	62.25	0	− 8	33.99	50.13	−19	− 1
2	48.09	20.96	+20	+ 1	35.65	12.33	− 4	− 8	31.12	61.86	− 8	− 8	34.22	49.76	−17	+ 2
3	47.59	20.76	+16	− 3	35.37	11.99	−11	− 7	31.09	61.46	−15	− 6	34.45	49.39	−13	+ 5
4	47.10	20.55	+ 9	− 6	35.10	11.64	−16	− 5	31.07	61.06	−18	− 3	34.69	49.02	− 6	+ 6
5	46.61	20.33	+ 2	− 8	34.84	11.29	−18	− 2	31.06	60.67	−19	0	34.94	48.66	+ 2	+ 6
6	46.13	20.11	− 6	− 8	34.58	10.94	−18	+ 2	31.06	60.27	−16	+ 3	35.20	48.29	+10	+ 5
7	45.65	19.88	−13	− 6	34.33	10.58	−14	+ 5	31.06	59.87	−10	+ 6	35.47	47.93	+16	+ 2
8	45.18	19.65	−17	− 4	34.09	10.22	− 7	+ 7	31.07	59.48	− 3	+ 7	35.74	47.57	+19	− 2
9	44.71	19.41	−19	0	33.86	9.86	+ 1	+ 7	31.09	59.08	+ 6	+ 7	36.02	47.21	+17	− 6
10	44.25	19.17	−17	+ 3	33.64	9.50	+ 9	+ 6	31.12	58.68	+13	+ 5	36.31	46.85	+11	− 9
11	43.80	18.92	−12	+ 5	33.43	9.13	+16	+ 4	31.16	58.29	+18	+ 1	36.61	46.50	+ 2	−11
12	43.36	18.67	− 4	+ 7	33.23	8.76	+19	0	*)31.21	57.89	+19	− 3	36.91	46.15	− 7	−10
13	42.92	18.41	+ 4	+ 7	33.04	8.39	+18	− 5	31.27	57.50	+15	− 7	37.22	45.81	−15	− 7
14	42.49	18.15	+12	+ 5	32.86	8.02	+13	− 9	31.34	57.10	+ 8	−10	37.54	45.46	−19	− 2
15	42.06	17.88	+17	+ 2	32.68	7.65	+ 4	−11	31.41	56.71	− 2	−10	37.86	45.12	−19	+ 4
16	41.64	17.61	+19	− 3	32.51	7.28	− 6	−10	31.49	56.31	−11	− 9	38.19	44.78	−14	+ 9
17	41.23	17.33	+16	− 7	32.35	6.90	−14	− 8	31.58	55.92	−17	− 5	38.53	44.44	− 6	+12
18	40.82	17.05	+ 9	−10	32.20	6.52	−19	− 3	31.68	55.52	−20	0	38.88	44.11	+ 4	+13
19	40.42	16.76	0	−12	32.06	6.14	−20	+ 2	31.79	55.13	−18	+ 5	39.23	43.78	+13	+11
20	40.03	16.47	−10	−10	31.93	5.75	−16	+ 7	31.91	54.74	−11	+10	39.59	43.45	+19	+ 7
21	39.65	16.17	−17	− 7	31.81	5.37	− 8	+10	32.04	54.35	− 2	+12	39.96	43.13	+21	+ 3
22	39.27	15.87	−21	− 2	31.70	4.98	+ 2	+12	32.18	53.96	+ 8	+12	40.33	42.81	+19	− 1
23	38.90	15.57	−19	+ 4	31.60	4.60	+11	+11	32.32	53.57	+16	+ 9	40.71	42.49	+13	− 5
24	38.54	15.26	−13	+ 9	31.51	4.21	+18	+ 8	32.47	53.18	+20	+ 5	41.10	42.18	+ 5	− 7
25	38.19	14.95	− 4	+11	31.42	3.82	+21	+ 4	32.63	52.79	+20	+ 1	41.49	41.87	− 3	− 8
26	37.84	14.64	+ 6	+12	31.34	3.43	+19	− 1	32.80	52.41	+17	− 3	41.89	41.57	−10	− 7
27	37.50	14.32	+14	+10	31.27	3.04	+15	− 5	32.98	52.03	+10	− 6	42.30	41.27	−16	− 5
28	37.17	14.00	+20	+ 7	31.21	2.65	+ 7	− 7	33.17	51.64	+ 2	− 8	42.71	40.97	−19	− 2
29	36.85	13.67	+21	+ 2	31.16	2.25	0	− 8	33.36	51.26	− 6	− 8	43.13	40.67	−18	+ 1
30	36.54	13.34	+18	− 2					33.56	50.88	−13	− 6	43.55	40.38	−15	+ 4
31	36.24	13.01	+12	− 5					33.77	50.50	−17	− 4	43.98	40.09	− 8	+ 6
32	35.94	12.67	+ 4	− 7					33.99	50.13	−19	− 1				

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 50′ 40″	26.587	−26.568	−87° 51′ 0″	26.655	−26.637	−87° 51′ 20″	26.724	−26.706
50	26.621	−26.602	10	26.690	−26.671	30	26.759	−26.740

$\alpha_{1933.0} = 23^h\ 18^m\ 45^s.85$ $\delta_{1933.0} = -87°\ 51'\ 2''.91$

*) Tag der doppelten unteren Kulmination: März 12

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sk) τ Octantis $5^m.56$

Tag	Mai				Juni				Juli				August			
	AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder		AR.	Dekl.	☾ Glieder	
	23^h18^m	−87°50′	in 0.01 s	in 0.01 "	23^h18^m	−87°50′	in 0.01 s	in 0.01 "	23^h19^m	−87°50′	in 0.01 s	in 0.01 "	23^h19^m	−87°50′	in 0.01 s	in 0.01 "
	s	"			s	"			s	"			s	"		
1	43.98	40.09	− 8	+ 6	59.61	33.41	+16	+ 1	16.67	31.70	+12	−10	32.09	35.13	−18	− 7
2	44.42	39.81	− 1	+ 6	60.17	33.27	+18	− 4	17.23	31.73	+ 3	−12	32.50	35.32	−21	− 2
3	44.86	39.53	+ 7	+ 5	60.73	33.14	+15	− 8	17.78	31.77	− 6	−12	32.90	35.51	−18	+ 4
4	45.31	39.26	+14	+ 3	61.29	33.01	+ 8	−11	18.33	31.81	−15	− 9	33.30	35.71	−12	+ 8
5	45.76	38.99	+18	− 1	61.85	32.89	− 1	−12	18.88	31.86	−20	− 5	33.69	35.91	− 2	+11
6	46.22	38.72	+18	− 5	62.42	32.78	−10	−11	19.43	31.91	−20	+ 1	34.07	36.12	+ 7	+11
7	46.68	38.46	+13	− 9	62.99	32.67	−17	− 7	19.97	31.97	−16	+ 6	34.44	36.33	+16	+ 9
8	47.15	38.20	+ 5	−11	63.56	32.56	−21	− 2	20.51	32.04	− 8	+10	34.81	36.55	+20	+ 5
9	47.62	37.95	− 4	−11	64.13	32.46	−19	+ 4	21.05	32.11	+ 2	+12	35.17	36.77	+21	+ 1
10	48.10	37.70	−13	− 9	64.70	32.37	−13	+ 9	21.58	32.18	+12	+11	35.52	36.99	+17	− 3
11	48.58	37.45	−18	− 4	65.27	32.28	− 3	+12	22.11	32.26	+18	+ 9	35.86	37.22	+10	− 6
12	49.07	37.21	−19	+ 1	65.85	32.20	+ 6	+13	22.63	32.35	+21	+ 4	36.19	37.45	+ 2	− 7
13	49.56	36.97	−17	+ 7	66.42	32.12	+15	+11	23.15	32.44	+20	0	36.52	37.68	− 6	− 7
14	50.06	36.74	− 9	+11	66.99	32.05	+20	+ 7	23.67	32.53	+15	− 4	36.84	37.92	−13	− 5
15	50.56	36.51	0	+13	67.57	31.98	+21	+ 3	24.18	32.63	+ 7	− 6	37.15	38.16	−17	− 2
16	51.06	36.29	+10	+12	68.14	31.92	+18	− 2	24.69	32.74	− 1	− 7	37.45	38.40	−18	+ 1
17	51.57	36.07	+17	+ 9	68.71	31.87	+12	− 5	25.19	32.85	− 9	− 6	37.74	38.65	−16	+ 4
18	52.08	35.86	+21	+ 5	69.29	31.82	+ 4	− 7	25.69	32.97	−15	− 4	38.02	38.90	−11	+ 6
19	52.60	35.65	+20	+ 1	69.86	31.78	− 4	− 7	26.19	33.09	−18	− 1	38.29	39.16	− 4	+ 7
20	53.12	35.45	+16	− 3	70.43	31.74	−12	− 6	26.68	33.22	−18	+ 2	38.56	39.42	+ 4	+ 7
21	53.64	35.25	+ 9	− 6	71.01	31.71	−16	− 3	27.16	33.35	−14	+ 5	38.82	39.68	+11	+ 6
22	54.17	35.06	0	− 7	71.58	31.68	−18	0	27.64	33.49	− 9	+ 7	39.06	39.94	+16	+ 2
23	54.70	34.87	− 8	− 7	72.15	31.66	−17	+ 3	28.11	33.63	− 1	+ 7	39.30	40.20	+19	− 2
24	55.23	34.69	−14	− 5	72.72	31.65	−13	+ 5	28.58	33.78	+ 7	+ 7	39.53	40.47	+16	− 6
25	55.77	34.51	−17	− 3	73.29	31.64	− 6	+ 7	29.04	33.93	+13	+ 4	39.75	40.74	+10	−10
26	56.31	34.34	−18	0	73.85	31.64	+ 1	+ 7	29.49	34.09	+17	0	39.96	41.02	+ 2	−11
27	56.85	34.17	−16	+ 3	74.42	31.64	+ 9	+ 5	29.94	34.25	+18	− 4	40.15	41.29	− 8	−11
28	57.40	34.01	−11	+ 5	74.99	31.65	+15	+ 2	30.38	34.42	+14	− 8	40.34	41.57	−16	− 8
29	57.95	33.85	− 4	+ 6	75.55	31.66	+18	− 2	30.82	34.59	+ 7	−11	40.52	41.86	−20	− 4
30	58.50	33.70	+ 4	+ 6	76.11	31.68	+17	− 6	31.25	34.77	− 2	−12	40.69	42.14	−20	+ 2
31	59.06	33.55	+12	+ 4	76.67	31.70	+12	−10	31.67	34.95	−11	−11	40.85	42.42	−15	+ 7
32	59.61	33.41	+16	+ 1					32.09	35.13	−18	− 7	41.00	42.71	− 6	+10

δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 50′ 30″	26.553	−26.534	−87° 50′ 40″	26.587	−26.568
40	26.587	−26.568	50	26.621	−26.602

$\alpha_{1933.0} = 23^h\ 18^m\ 45^s.85$ $\delta_{1933.0} = -87°\ 51'\ 2''.91$

Scheinbare Sternörter 1933

Obere Kulmination Greenwich

Sk) τ Octantis $5^m.56$

Tag	September AR.	September Dekl.	September ☾ Glieder	Oktober AR.	Oktober Dekl.	Oktober ☾ Glieder	November AR.	November Dekl.	November ☾ Glieder	Dezember AR.	Dezember Dekl.	Dezember ☾ Glieder
	23^h19^m	−87° 50′	in $0^s.01$ $0''.01$	23^h19^m	−87° 50′	in $0^s.01$ $0''.01$	23^h19^m	−87° 50′	in $0^s.01$ $0''.01$	23^h18^m	−87° 50′	in $0^s.01$ $0''.01$
	s	″		s	″		s	″		s	″	
1	41.00	42.71	− 6 +10	40.36	51.95	+21 + 4	30.04	59.50	+ 3 − 7	73.97	62.32	−15 − 3
2	41.13	43.00	+ 3 +11	40.17	52.24	+20 0	29.57	59.68	− 6 − 7	73.39	62.32	−18 0
3	41.26	43.28	+13 +10	39.96	52.53	+15 − 4	29.10	59.85	−13 − 6	72.81	62.31	−17 + 3
4	41.38	43.57	+19 + 7	39.75	52.81	+ 8 − 7	28.62	60.02	−17 − 3	72.23	62.30	−13 + 5
5	41.49	43.87	+21 + 2	39.52	53.09	− 1 − 7	28.14	60.18	−18 0	71.65	62.28	− 8 + 7
6	41.59	44.17	+19 − 2	39.29	53.37	− 9 − 7	27.65	60.34	−16 + 3	71.08	62.25	0 + 7
7	41.68	44.46	+13 − 5	39.05	53.65	−14 − 5	27.15	60.49	−12 + 6	70.50	62.21	+ 7 + 6
8	41.75	44.76	+ 5 − 7	38.80	53.93	−18 − 2	26.65	60.63	− 5 + 7	69.92	62.17	+13 + 3
9	41.81	45.06	− 4 − 7	38.54	54.20	−18 + 1	26.14	60.77	+ 3 + 7	69.34	62.12	+17 0
10	41.87	45.36	−11 − 6	38.27	54.47	−15 + 4	25.63	60.90	+ 9 + 5	68.76	62.07	+18 − 5
11	41.91 41.94	45.66 45.96	−16 − 3 −18 0	37.99	54.74	− 9 + 6	25.11	61.03	+15 + 2	68.18	62.01	+13 − 9
12	41.97	46.26	−17 + 3	37.70	55.00	− 2 + 7	24.59	61.15	+17 − 2	67.60	61.94	+ 6 −12
13	41.98	46.57	−13 + 5	37.40	55.26	+ 5 + 6	24.06	61.27	+16 − 6	67.02	61.86	− 3 −12
14	41.98	46.87	− 7 + 7	37.09	55.52	+12 + 4	23.53	61.38	+11 −10	66.44	61.78	−11 −11
15	41.97	47.17	+ 1 + 7	36.77	55.77	+17 + 1	22.99	61.48	+ 3 −12	65.87	61.69	−18 − 7
16	41.95	47.47	+ 8 + 6	36.44	56.02	+18 − 3	22.45	61.58	− 6 −11	65.30	61.59	−20 − 2
17	41.91	47.78	+14 + 4	36.10	56.27	+15 − 7	21.90	61.67	−14 − 9	64.73	61.49	−18 + 4
18	41.87	48.08	+18 0	35.75	56.51	+ 9 −10	21.35	61.76	−19 − 4	64.16	61.39	−12 + 9
19	41.82	48.38	+17 − 4	35.40	56.75	0 −11	20.80	61.84	−20 + 1	63.60	61.28	− 2 +11
20	41.76	48.69	+13 − 8	35.04	56.99	− 9 −10	20.25	61.92	−16 + 7	63.04	61.16	+ 8 +12
21	41.69	48.99	+ 6 −11	34.67	57.22	−16 − 7	19.69	61.99	− 8 +10	62.48	61.04	+16 +10
22	41.60	49.29	− 4 −11	34.29	57.45	−20 − 2	19.13	62.05	+ 2 +12	61.93	60.91	+21 + 6
23	41.50	49.59	−12 − 9	33.90	57.68	−19 + 4	18.56	62.11	+12 +11	61.38	60.77	+21 + 2
24	41.40	49.89	−19 − 5	33.50	57.90	−13 + 8	17.99	62.16	+18 + 8	60.83	60.63	+17 − 3
25	41.28	50.19	−20 0	33.09	58.12	− 4 +11	17.42	62.20	+21 + 4	60.29	60.48	+10 − 6
26	41.16	50.49	−17 + 5	32.68	58.33	+ 6 +12	16.85	62.24	+20 − 1	59.75	60.32	+ 1 − 7
27	41.02	50.79	−10 + 9	32.26	58.54	+15 +10	16.27	62.27	+14 − 4	59.21	60.16	− 7 − 6
28	40.87	51.08	0 +11	31.83	58.74	+20 + 6	15.70	62.29	+ 6 − 7	58.68	59.99	−14 − 4
29	40.71	51.37	+10 +11	31.39	58.94	+21 + 2	15.12	62.31	− 2 − 7	58.15	59.82	−17 − 1
30	40.54	51.66	+17 + 8	30.95	59.13	+18 − 3	14.55	62.32	−10 − 6	57.63	59.64	−17 + 2
31	40.36	51.95	+21 + 4	30.50	59.32	+11 − 6	13.97	62.32	−15 − 3	57.11	59.45	−15 + 5
32				30.04	59.50	+ 3 − 7				56.60	59.26	−10 + 7

δ	sec δ	tg δ	δ	sec δ	tg δ	δ	sec δ	tg δ
−87° 50′ 40″	26.587	−26.568	−87° 50′ 50″	26.621	−26.602	−87° 51′ 0″	26.655	−26.637
50	26.621	−26.602	60	26.655	−26.637	10	26.690	−26.671

$\alpha_{1933.0} = 23^h\ 18^m\ 45^s.85$ $\delta_{1933.0} = -\ 87°\ 51'\ 2''.91$

Polnahe Sterne 1933

Scheinbare Koordinaten für 12h Sternzeit Greenwich

Tag	BD +89° 1 Gr. 10.56 m		BD +89° 3 Gr. 9.06 m		BD +89° 37 Gr. 10.06 m		CPD −89° 38 Gr. 9.5 m		Kurzperiod. Nutationsgl.*) in 0.01″	
1933	x	y	x	y	x	y	x	y		
	″	″	″	″	″	″	″	″		
Jan. 0	−161.80	+68.07	+38.96	+852.47	−944.23	−354.96	−185.07	−302.44	−12	− 5
1	161.82	67.74	38.94	852.14	944.25	355.29	184.93	302.76	− 9	− 9
2	161.83	67.41	38.93	851.81	944.26	355.63	184.78	303.09	− 5	−11
3	161.84	67.07	38.93	851.47	944.27	355.96	184.62	303.41	− 1	−10
4	161.84	66.74	38.94	851.14	944.27	356.29	184.46	303.73	+ 3	− 8
5	−161.83	+66.41	+38.95	+850.81	−944.26	−356.62	−184.30	−304.05	+ 6	− 5
6	161.81	66.08	38.97	850.48	944.24	356.95	184.13	304.37	+ 8	− 1
7	161.79	65.75	38.99	850.15	944.22	357.28	183.95	304.68	+ 8	+ 4
8	161.76	65.42	39.02	849.82	944.19	357.61	183.76	304.99	+ 6	+ 7
9	161.72	65.09	39.05	849.50	944.16	357.94	183.57	305.30	+ 4	+ 9
10	−161.68	+64.77	+39.09	+849.18	−944.12	−358.27	−183.38	−305.60	0	+10
11	161.63	64.45	39.14	848.86	944.07	358.59	183.18	305.90	− 3	+ 9
12	161.57	64.13	39.19	848.54	944.01	358.91	182.97	306.20	− 6	+ 6
13	161.51	63.81	39.25	848.22	943.95	359.23	182.76	306.50	− 7	+ 2
14	161.44	63.49	39.32	847.90	943.88	359.55	182.54	306.80	− 7	− 3
15	−161.37	+63.17	+39.39	+847.58	−943.81	−359.87	−182.32	−307.09	− 5	− 7
16	161.29	62.86	39.47	847.27	943.73	360.18	182.09	307.38	− 1	−10
17	161.20	62.55	39.56	846.96	943.64	360.49	181.86	307.67	+ 3	−11
18	161.10	62.24	39.66	846.65	943.54	360.80	181.62	307.95	+ 7	− 9
19	161.00	61.93	39.76	846.34	943.44	361.11	181.38	308.23	+10	− 5
20	−160.90	+61.63	+39.86	+846.04	−943.34	−361.41	−181.13	−308.51	+11	0
21	160.79	61.33	39.97	845.74	943.23	361.71	180.88	308.78	+10	+ 6
22	160.67	61.03	40.09	845.44	943.11	362.01	180.62	309.05	+ 6	+10
23	160.55	60.73	40.21	845.15	942.99	362.31	180.36	309.31	+ 1	+11
24	160.42	60.44	40.34	844.86	942.86	362.60	180.09	309.57	− 5	+10
25	−160.29	+60.15	+40.48	+844.57	−942.73	−362.89	−179.82	−309.83	− 9	+ 7
26	160.15	59.86	40.62	844.28	942.59	363.18	179.54	310.08	−11	+ 2
27	160.00	59.58	40.77	844.00	942.44	363.47	179.26	310.33	−12	− 3
28	159.85	59.30	40.92	843.72	942.28	363.75	178.97	310.58	−10	− 7
29	159.69	59.02	41.08	843.45	942.12	364.03	178.68	310.83	− 6	−10
30	−159.53	+58.75	+41.24	+843.18	−941.96	−364.30	−178.39	−311.07	− 2	−11
31	159.36	58.48	41.41	842.91	941.79	364.57	178.09	311.31	+ 2	− 9
Febr. 1	159.18	58.21	41.58	842.64	941.61	364.84	177.79	311.54	+ 5	− 6
2	159.00	57.95	41.76	842.38	941.43	365.10	177.48	311.77	+ 7	− 2
3	158.81	57.69	41.95	842.12	941.24	365.36	177.17	311.99	+ 8	+ 2
4	−158.62	+57.44	+42.14	+841.87	−941.05	−365.62	−176.85	−312.21	+ 7	+ 6
5	158.43	57.19	42.34	841.62	940.86	365.87	176.53	312.43	+ 5	+ 9
6	−158.23	+56.95	+42.54	+841.38	−940.66	−366.12	−176.21	−312.64	+ 2	+10
Mittl. Ort	−139.29″	+79.22″	+61.50″	+863.61″	−921.73″	−343.78″	−167.19″	−307.49″		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12h Sternzeit Greenwich

Tag	BD +89° 1 Gr. 10.56		BD +89° 3 Gr. 9.06		BD +89° 37 Gr. 10.06		CPD −89° 38 Gr. 9.5		Kurzperiod. Nutationsgl.*)	
1933	x	y	x	y	x	y	x	y	in 0.01"	
Febr. 6	−158.23	+56.95	+42.54	+841.38	−940.66	−366.12	−176.21	−312.64	+ 2	+10
7	158.02	56.71	42.75	841.14	940.45	366.36	175.89	312.85	− 2	+ 9
8	157.81	56.47	42.96	840.90	940.24	366.60	175.56	313.05	− 5	+ 7
9	157.60	56.24	43.17	840.67	940.03	366.83	175.23	313.25	− 7	+ 4
10	157.38	56.01	43.39	840.44	939.81	367.05	174.89	313.44	− 7	− 1
11	−157.15	+55.79	+43.61	+840.22	−939.58	−367.27	−174.55	−313.63	− 6	− 6
12	156.92	55.57	43.84	840.00	939.35	367.49	174.21	313.82	− 3	− 9
13	156.69	55.36	44.07	839.79	939.12	367.71	173.86	314.00	+ 1	−11
14	156.45	55.15	44.31	839.58	938.88	367.92	173.51	314.18	+ 5	−10
15	156.21	54.95	44.55	839.38	938.64	368.12	173.16	314.35	+ 9	− 7
16	−155.96	+54.75	+44.80	+839.18	−938.39	−368.32	−172.81	−314.52	+11	− 2
17	155.71	54.56	45.05	838.99	938.14	368.51	172.45	314.68	+10	+ 3
18	155.46	54.37	45.30	838.80	937.89	368.70	172.09	314.84	+ 7	+ 8
19	155.20	54.19	45.55	838.62	937.64	368.88	171.73	314.99	+ 3	+11
20	154.94	54.02	45.81	838.45	937.38	369.06	171.37	315.14	− 3	+11
21	−154.68	+53.85	+46.07	+838.28	−937.12	−369.23	−171.00	−315.28	− 7	+ 9
22	154.41	53.68	46.34	838.11	936.85	369.39	170.63	315.42	−11	+ 4
23	154.14	53.52	46.61	837.95	936.58	369.55	170.26	315.56	−12	− 1
24	153.87	53.37	46.88	837.80	936.31	369.70	169.89	315.69	−10	− 6
25	153.59	53.22	47.16	837.65	936.03	369.85	169.51	315.81	− 7	− 9
26	−153.31	+53.08	+47.44	+837.51	−935.75	−369.99	−169.13	−315.93	− 3	−11
27	153.03	52.94	47.72	837.37	935.47	370.13	168.75	316.05	+ 1	−10
28	152.75	52.81	48.00	837.24	935.19	370.26	168.37	316.16	+ 5	− 7
März 1	152.46	52.69	48.29	837.12	934.90	370.38	167.99	316.26	+ 7	− 4
2	152.17	52.57	48.58	837.00	934.61	370.50	167.61	316.36	+ 8	+ 1
3	−151.88	+52.46	+48.87	+836.89	−934.32	−370.61	−167.22	−316.46	+ 8	+ 5
4	151.58	52.35	49.16	836.78	934.02	370.72	166.83	316.55	+ 6	+ 8
5	151.28	52.25	49.46	836.68	933.72	370.82	166.44	316.64	+ 3	+10
6	150.98	52.16	49.76	836.59	933.42	370.91	166.05	316.72	0	+10
7	150.68	52.07	50.06	836.50	933.12	371.00	165.66	316.79	− 3	+ 8
8	−150.38	+51.99	+50.36	+836.42	−932.82	−371.08	−165.27	−316.86	− 6	+ 5
9	150.08	51.92	50.66	836.35	932.52	371.16	164.88	316.93	− 7	+ 1
10	149.78	51.85	50.96	836.28	932.22	371.23	164.49	316.99	− 6	− 4
11	149.48	51.79	51.26	836.22	931.92	371.29	164.10	317.04	− 4	− 8
12	149.17	51.73	51.57	836.16	931.61	371.35	163.70	317.09	− 1	−10
13	−148.86	+51.68	+51.88	+836.11	−931.30	−371.40	−163.30	−317.14	+ 3	−11
14	148.55	51.63	52.19	836.06	930.99	371.45	162.90	317.18	+ 7	− 8
15	−148.24	+51.59	+52.50	+836.02	−930.68	−371.49	−162.51	−317.22	+10	− 4
Mittl. Ort	−139.29	+79.22	+61.50	+863.61	−921.73	−343.78	−167.19	−307.49		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12h Sternzeit Greenwich

Tag	BD +89° 1 Gr. 10.56m		BD +89° 3 Gr. 9.06m		BD +89° 37 Gr. 10.06m		CPD − 89° 38 Gr. 9.5m		Kurzperiod. Nutationsgl.*)	
1933	x	y	x	y	x	y	x	y	in 0.01″	
	″	″	″	″	″	″	″	″		
März 15	−148.24	+51.59	+52.50	+836.02	−930.68	−371.49	−162.51	−317.22	+10	− 4
16	147.93	51.56	52.81	835.99	930.37	371.52	162.12	317.25	+10	+ 1
17	147.62	51.54	53.12	835.97	930.06	371.54	161.73	317.27	+ 8	+ 6
18	147.31	51.52	53.43	835.95	929.75	371.56	161.33	317.29	+ 4	+10
19	147.00	51.51	53.74	835.94	929.44	371.57	160.93	317.31	− 1	+11
20	−146.69	+51.50	+54.05	+835.94	−929.13	−371.58	−160.53	−317.32	− 6	+10
21	146.38	51.50	54.36	835.94	928.82	371.58	160.13	317.32	−10	+ 6
22	146.07	51.50	54.67	835.94	928.51	371.58	159.73	317.32	−12	+ 1
23	145.76	51.51	54.98	835.95	928.20	371.57	159.33	317.32	−11	− 4
23	145.45	51.53	55.29	835.97	927.89	371.55	158.93	317.31	− 9	− 8
24	−145.14	+51.56	+55.60	+836.00	−927.58	−371.52	−158.53	−317.30	− 5	−10
25	144.83	51.59	55.91	836.03	927.27	371.49	158.13	317.28	0	−10
26	144.52	51.63	56.22	836.07	926.96	371.45	157.74	317.26	+ 4	− 8
27	144.21	51.67	56.53	836.11	926.65	371.41	157.35	317.23	+ 7	− 5
28	143.91	51.72	56.83	836.16	926.34	371.36	156.96	317.20	+ 8	− 1
29	−143.61	+51.77	+57.13	+836.21	−926.04	−371.31	−156.57	−317.16	+ 8	+ 3
30	143.31	51.83	57.43	836.27	925.74	371.25	156.18	317.11	+ 7	+ 7
31	143.01	51.90	57.73	836.34	925.44	371.18	155.79	317.06	+ 4	+ 9
April 1	142.71	51.97	58.03	836.41	925.14	371.11	155.40	317.01	+ 1	+10
2	142.41	52.05	58.33	836.49	924.84	371.03	155.01	316.95	− 2	+ 9
3	−142.11	+52.13	+58.63	+836.57	−924.54	−370.95	−154.62	−316.89	− 5	+ 6
4	141.81	52.22	58.93	836.66	924.24	370.86	154.23	316.82	− 6	+ 2
5	141.52	52.32	59.22	836.76	923.95	370.76	153.85	316.75	− 6	− 2
6	141.23	52.42	59.51	836.86	923.66	370.66	153.47	316.67	− 5	− 7
7	140.94	52.53	59.80	836.97	923.37	370.55	153.09	316.59	− 2	−10
8	−140.65	+52.65	+60.08	+837.09	−923.08	−370.43	−152.71	−316.50	+ 2	−11
9	140.37	52.77	60.36	837.21	922.80	370.31	152.33	316.41	+ 6	−10
10	140.09	52.89	60.64	837.33	922.52	370.19	151.95	316.32	+ 9	− 6
11	139.81	53.02	60.92	837.46	922.24	370.06	151.58	316.22	+10	− 1
12	139.54	53.16	61.19	837.60	921.97	369.92	151.21	316.12	+ 9	+ 4
13	−139.27	+53.30	+61.46	+837.74	−921.70	−369.78	−150.84	−316.01	+ 6	+ 9
14	139.00	53.45	61.73	837.89	921.43	369.63	150.47	315.90	+ 1	+11
15	138.73	53.60	62.00	838.04	921.16	369.48	150.10	315.78	− 5	+11
16	138.47	53.76	62.26	838.20	920.89	369.32	149.74	315.66	− 9	+ 8
17	138.21	53.92	62.52	838.36	920.63	369.16	149.38	315.53	−12	+ 3
18	−137.95	+54.09	+62.78	+838.53	−920.37	−368.99	−149.02	−315.40	−12	− 2
19	137.70	54.26	63.03	838.70	920.12	368.82	148.67	315.27	−10	− 7
20	−137.45	+54.44	+63.28	+838.88	−919.87	−368.64	−148.32	−315.13	− 7	−10
Mittl. Ort	−139.29″	+79.22″	+61.50″	+863.61″	−921.73″	−343.78″	−167.19″	−307.49″		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12^h Sternzeit Greenwich

Tag	BD +89° 1 Gr. 10.56 (m)		BD +89° 3 Gr. 9.06 (m)		BD +89° 37 Gr. 10.06 (m)		CPD −89° 38 Gr. 9.5 (m)		Kurzperiod. Nutationsgl.*)	
1933	x	y	x	y	x	y	x	y	in 0.″01	
	″	″	″	″	″	″	″	″		
April 20	−137.45	+54.44	+63.28	+838.88	−919.87	−368.64	−148.32	−315.13	− 7	−10
21	137.20	54.62	63.53	839.06	919.62	368.46	147.97	314.99	− 2	−11
22	136.96	54.81	63.77	839.25	919.38	368.27	147.62	314.84	+ 2	− 9
23	136.72	55.00	64.01	839.44	919.14	368.08	147.27	314.69	+ 5	− 6
24	136.49	55.20	64.24	839.64	918.90	367.88	146.93	314.53	+ 7	− 2
25	−136.26	+55.40	+64.47	+839.84	−918.67	−367.68	−146.59	−314.37	+ 8	+ 2
26	136.03	55.61	64.70	840.05	918.44	367.47	146.25	314.21	+ 7	+ 6
27	135.81	55.82	64.92	840.26	918.22	367.26	145.92	314.04	+ 5	+ 9
28	135.59	56.04	65.14	840.48	918.00	367.05	145.59	313.87	+ 2	+10
29	135.38	56.26	65.35	840.70	917.79	366.83	145.26	313.69	− 1	+10
30	−135.17	+56.48	+65.56	+840.92	−917.58	−366.61	−144.94	−313.51	− 4	+ 7
Mai 1	134.96	56.71	65.77	841.15	917.37	366.38	144.62	313.32	− 6	+ 4
2	134.76	56.94	65.97	841.38	917.17	366.15	144.31	313.13	− 6	− 1
3	134.56	57.18	66.17	841.61	916.97	365.92	144.00	312.94	− 5	− 5
4	134.37	57.42	66.36	841.85	916.78	365.68	143.69	312.74	− 2	− 9
5	−134.18	+57.66	+66.55	+842.09	−916.59	−365.44	−143.38	−312.54	+ 1	−11
6	134.00	57.91	66.73	842.34	916.41	365.19	143.08	312.34	+ 6	−10
7	133.82	58.16	66.90	842.59	916.23	364.94	142.78	312.13	+ 9	− 8
8	133.65	58.41	67.07	842.84	916.06	364.69	142.49	311.92	+11	− 3
9	133.48	58.67	67.24	843.10	915.89	364.43	142.20	311.70	+10	+ 2
10	−133.32	+58.93	+67.40	+843.36	−915.73	−364.17	−141.91	−311.48	+ 8	+ 7
11	133.16	59.19	67.56	843.62	915.57	363.91	141.62	311.26	+ 3	+10
12	133.01	59.46	67.71	843.89	915.42	363.64	141.34	311.04	− 2	+11
13	132.86	59.73	67.85	844.16	915.27	363.37	141.06	310.81	− 7	+ 9
14	132.72	60.00	67.99	844.43	915.13	363.10	140.79	310.58	−11	+ 5
15	−132.58	+60.28	+68.13	+844.70	−914.99	−362.82	−140.52	−310.35	−13	0
16	132.45	60.56	68.26	844.98	914.86	362.54	140.26	310.11	−12	− 5
17	132.32	60.84	68.38	845.26	914.74	362.26	140.00	309.87	− 9	− 9
18	132.20	61.12	68.50	845.54	914.62	361.98	139.75	309.63	− 5	−11
19	132.09	61.41	68.62	845.83	914.50	361.69	139.50	309.38	0	−10
20	−131.98	+61.70	+68.73	+846.12	−914.39	−361.40	−139.26	−309.13	+ 4	− 8
21	131.88	61.99	68.83	846.41	914.28	361.11	139.02	308.88	+ 6	− 4
22	131.78	62.28	68.93	846.70	914.18	360.82	138.78	308.63	+ 8	0
23	131.69	62.58	69.02	846.99	914.08	360.53	138.55	308.38	+ 7	+ 4
24	131.60	62.88	69.11	847.29	913.99	360.23	138.32	308.12	+ 6	+ 8
25	−131.51	+63.18	+69.20	+847.59	−913.91	−359.93	−138.10	−307.86	+ 3	+10
26	131.44	63.48	69.27	847.89	913.83	359.63	137.88	307.60	0	+10
27	−131.37	+63.78	+69.34	+848.19	−913.76	−359.33	−137.67	−307.33	− 3	+ 9
Mittl. Ort	−139.29	+79.22	+61.50	+863.61	−921.73	−343.78	−167.19	−307.49		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12^{h} Sternzeit Greenwich

Tag	BD +89° 1 Gr. $10^{m}.56$		BD +89° 3 Gr. $9^{m}.06$		BD +89° 37 Gr. $10^{m}.06$		CPD −89° 38 Gr. $9^{m}.5$		Kurzperiod. Nutationsgl.*)	
1933	x	y	x	y	x	y	x	y	in $0''.01$	
Mai 27	−131.37"	+63.78"	+69.34"	+848.19"	−913.76"	−359.33"	−137.67"	−307.33"	− 3	+ 9
28	131.30	64.08	69.41	848.49	913.70	359.03	137.46	307.06	− 5	+ 5
29	131.24	64.38	69.47	848.80	913.64	358.72	137.26	306.78	− 6	+ 1
30	131.19	64.69	69.52	849.11	913.58	358.41	137.07	306.50	− 6	− 3
31	131.14	65.00	69.57	849.42	913.53	358.10	136.88	306.22	− 3	− 7
Juni 1	−131.10	+65.31	+69.61	+849.73	−913.49	−357.79	−136.69	−305.94	0	−10
2	131.06	65.62	69.65	850.04	913.45	357.48	136.51	305.66	+ 4	−11
3	131.03	65.93	69.68	850.35	913.42	357.17	136.33	305.38	+ 8	− 9
4	131.01	66.24	69.70	850.66	913.39	356.86	136.16	305.09	+11	− 5
5	130.99	66.55	69.72	850.97	913.37	356.55	135.99	304.80	+12	0
6	−130.97	+66.86	+69.73	+851.28	−913.36	−356.24	−135.83	−304.51	+10	+ 5
7	130.96	67.17	69.74	851.60	913.35	355.93	135.67	304.22	+ 6	+ 9
8	130.96	67.49	69.74	851.92	913.35	355.61	135.52	303.93	0	+11
9	130.96	67.81	69.74	852.24	913.35	355.29	135.38	303.64	− 5	+10
10	130.97	68.13	69.73	852.56	913.36	354.97	135.24	303.34	−10	+ 7
11	−130.99	+68.45	+69.71	+852.88	−913.37	−354.65	−135.10	−303.04	−12	+ 2
12	131.01	68.77	69.69	853.20	913.39	354.34	134.97	302.74	−13	− 3
13	131.03	69.09	69.67	853.52	913.41	354.03	134.85	302.44	−11	− 7
14	131.06	69.41	69.64	853.84	913.44	353.72	134.73	302.14	− 7	−10
15	131.10	69.73	69.60	854.16	913.48	353.40	134.62	301.84	− 2	−11
16	−131.14	+70.05	+69.56	+854.48	−913.53	−353.08	−134.51	−301.54	+ 2	− 9
17	131.19	70.37	69.51	854.80	913.58	352.76	134.41	301.24	+ 5	− 6
18	131.25	70.69	69.45	855.12	913.63	352.44	134.31	300.94	+ 7	− 2
19	131.31	71.00	69.39	855.43	913.69	352.12	134.22	300.63	+ 7	+ 3
20	131.38	71.31	69.32	855.74	913.76	351.80	134.14	300.32	+ 6	+ 6
21	−131.46	+71.62	+69.24	+856.05	−913.83	−351.48	−134.06	−300.01	+ 3	+ 9
22	131.54	71.94	69.16	856.37	913.91	351.16	133.98	299.71	+ 1	+10
23	131.63	72.25	69.07	856.69	913.99	350.84	133.91	299.40	− 2	+ 9
24	131.72	72.57	68.98	857.00	914.08	350.53	133.85	299.09	− 5	+ 7
25	131.81	72.88	68.88	857.31	914.18	350.22	133.79	298.78	− 6	+ 3
26	−131.91	+73.19	+68.78	+857.62	−914.28	−349.91	−133.74	−298.47	− 7	− 2
27	132.02	73.50	68.68	857.93	914.38	349.60	133.70	298.16	− 5	− 6
28	132.13	73.81	68.57	858.24	914.49	349.29	133.66	297.85	− 2	− 9
29	132.24	74.12	68.45	858.55	914.61	348.98	133.62	297.54	+ 2	−10
30	132.36	74.43	68.33	858.86	914.73	348.67	133.59	297.23	+ 7	−10
Juli 1	−132.49	+74.74	+68.20	+859.16	−914.85	−348.37	−133.57	−296.92	+10	− 7
2	132.62	75.05	68.06	859.47	914.98	348.06	133.55	296.61	+12	− 2
3	−132.76	+75.35	+67.92	+859.77	−915.12	−347.76	−133.54	−296.30	+11	+ 3
Mittl. Ort.	−139.29"	+79.22"	+61.50"	+863.61"	−921.73"	−343.78"	−167.19"	−307.49"		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12^h Sternzeit Greenwich

Tag	BD +89° 1 Gr. 10.56		BD +89° 3 Gr. 9.06		BD +89° 37 Gr. 10.06		CPD −89° 38 Gr. 9.5		Kurzperiod. Nutationsgl.*)	
1933	x	y	x	y	x	y	x	y	in 0.01"	
Juli 3	−132.76"	+75.35"	+67.92"	+859.77"	−915.12"	−347.76"	−133.54"	−296.30"	+11	+ 3
4	132.90	75.65	67.78	860.07	915.26	347.46	133.54	295.99	+ 8	+ 8
5	133.05	75.95	67.63	860.37	915.41	347.16	133.54	295.68	+ 4	+11
6	133.20	76.25	67.47	860.67	915.56	346.86	133.54	295.37	− 2	+11
7	133.36	76.55	67.31	860.96	915.72	346.56	133.55	295.06	− 7	+ 9
8	−133.53	+76.84	+67.15	+861.25	−915.89	−346.27	−133.57	−294.76	−11	+ 4
9	133.70	77.13	66.98	861.54	916.06	345.98	133.59	294.46	−12	− 1
10	133.87	77.42	66.80	861.83	916.23	345.69	133.62	294.16	−11	− 6
11	134.05	77.71	66.62	862.12	916.41	345.40	133.66	293.86	− 8	− 9
12	134.23	78.00	66.43	862.41	916.60	345.11	133.70	293.56	− 4	−11
13	−134.42	+78.29	+66.24	+862.70	−916.79	−344.82	−133.74	−293.26	0	−10
14	134.62	78.57	66.04	862.98	916.98	344.54	133.79	292.96	+ 4	− 7
15	134.82	78.85	65.84	863.26	917.18	344.26	133.85	292.66	+ 6	− 3
16	135.02	79.13	65.64	863.54	917.38	343.98	133.92	292.36	+ 7	+ 1
17	135.23	79.40	65.43	863.81	917.59	343.71	133.99	292.07	+ 6	+ 5
18	−135.45	+79.67	+65.22	+864.08	−917.80	−343.44	−134.06	−291.78	+ 4	+ 8
19	135.67	79.94	65.00	864.35	918.02	343.17	134.14	291.49	+ 1	+10
20	135.89	80.21	64.78	864.62	918.24	342.90	134.23	291.20	− 2	+ 9
21	136.12	80.47	64.55	864.88	918.47	342.64	134.32	290.92	− 5	+ 8
22	136.35	80.73	64.32	865.14	918.70	342.38	134.42	290.63	− 6	+ 4
23	−136.59	+80.99	+64.08	+865.40	−918.94	−342.12	−134.52	−290.35	− 7	0
24	136.83	81.25	63.84	865.66	919.18	341.86	134.63	290.07	− 6	− 4
25	137.08	81.51	63.59	865.92	919.42	341.61	134.74	289.79	− 4	− 8
26	137.33	81.76	63.34	866.17	919.67	341.36	134.86	289.52	0	−10
27	137.58	82.01	63.09	866.42	919.92	341.11	134.98	289.25	+ 5	−10
28	−137.84	+82.25	+62.83	+866.66	−920.18	−340.87	−135.11	−288.98	+ 9	− 8
29	138.10	82.49	62.57	866.90	920.44	340.63	135.24	288.71	+11	− 4
30	138.37	82.73	62.30	867.14	920.71	340.39	135.38	288.45	+12	+ 1
31	138.64	82.96	62.03	867.37	920.98	340.15	135.52	288.19	+10	+ 6
Aug. 1	138.92	83.19	61.75	867.60	921.25	339.92	135.67	287.93	+ 6	+10
2	−139.20	+83.42	+61.47	+867.83	−921.53	−339.69	−135.83	−287.68	+ 1	+11
3	139.48	83.64	61.19	868.05	921.81	339.47	135.99	287.43	− 5	+10
4	139.77	83.86	60.90	868.27	922.10	339.25	136.15	287.18	− 9	+ 6
5	140.06	84.08	60.61	868.49	922.39	339.03	136.32	286.93	−11	+ 1
6	140.35	84.30	60.31	868.71	922.68	338.81	136.49	286.69	−11	− 4
7	−140.65	+84.51	+60.01	+868.92	−922.98	−338.60	−136.67	−286.45	− 9	− 8
8	140.95	84.72	59.71	869.13	923.28	338.39	136.85	286.22	− 5	−10
9	−141.25	+84.92	+59.41	+869.33	−923.58	−338.19	−137.03	−285.99	− 1	−10
Mittl. Ort	−139.29"	+79.22"	+61.50"	+863.61"	−921.73"	−343.78"	−167.19"	−307.49"		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12^h Sternzeit Greenwich

Tag	BD +89° 1 Gr. 10.56		BD +89° 3 Gr. 9.06		BD +89° 37 Gr. 10.06		CPD −89° 38 Gr. 9.5		Kurzperiod. Nutationsgl.*)	
1933	x	y	x	y	x	y	x	y	in 0.01"	
Aug. 9	−141.25	+84.92	+59.41	+869.33	−923.58	−338.19	−137.03	−285.99	− 1	−10
10	141.56	85.12	59.10	869.53	923.89	337.99	137.22	285.76	+ 3	− 8
11	141.87	85.32	58.79	869.73	924.20	337.79	137.42	285.54	+ 6	− 5
12	142.19	85.51	58.47	869.92	924.51	337.60	137.62	285.32	+ 7	0
13	142.51	85.70	58.15	870.11	924.83	337.41	137.82	285.10	+ 7	+ 4
14	−142.83	+85.89	+57.83	+870.29	−925.15	−337.23	−138.03	−284.89	+ 5	+ 7
15	143.15	86.07	57.50	870.47	925.48	337.05	138.24	284.68	+ 2	+ 9
16	143.48	86.25	57.17	870.65	925.81	336.87	138.46	284.48	− 1	+10
17	143.81	86.42	56.84	870.82	926.14	336.70	138.68	284.28	− 4	+ 9
18	144.14	86.59	56.51	870.99	926.47	336.53	138.91	284.09	− 6	+ 6
19	−144.48	+86.75	+56.17	+871.15	−926.81	−336.37	−139.14	−283.90	− 7	+ 2
20	144.82	86.91	55.83	871.31	927.15	336.21	139.37	283.71	− 7	− 2
21	145.16	87.07	55.49	871.47	927.49	336.05	139.61	283.53	− 5	− 6
22	145.51	87.22	55.14	871.62	927.83	335.90	139.85	283.35	− 2	−10
23	145.86	87.37	54.79	871.77	928.18	335.75	140.09	283.18	+ 2	−11
24	−146.21	+87.51	+54.44	+871.91	−928.53	−335.61	−140.34	−283.01	+ 7	− 9
25	146.56	87.65	54.09	872.05	928.88	335.47	140.59	282.85	+10	− 6
26	146.91	87.79	53.73	872.19	929.23	335.34	140.84	282.69	+11	− 1
27	147.27	87.92	53.37	872.32	929.59	335.21	141.10	282.54	+10	+ 4
28	147.63	88.05	53.01	872.45	929.95	335.08	141.36	282.40	+ 7	+ 9
29	−147.99	+88.17	+52.65	+872.57	−930.31	−334.96	−141.62	−282.26	+ 3	+11
30	148.35	88.29	52.29	872.69	930.68	334.84	141.89	282.12	− 3	+10
31	148.71	88.41	51.93	872.80	931.04	334.73	142.16	281.99	− 7	+ 8
Sept. 1	149.08	88.52	51.56	872.91	931.41	334.62	142.43	281.87	−10	+ 3
2	149.45	88.62	51.19	873.01	931.78	334.52	142.70	281.75	−11	− 2
3	−149.82	+88.72	+50.82	+873.11	−932.15	−334.42	−142.98	−281.63	−10	− 7
4	150.19	88.82	50.45	873.21	932.52	334.32	143.26	281.52	− 6	−10
5	150.57	88.91	50.07	873.30	932.89	334.23	143.54	281.42	− 2	−11
6	150.95	88.99	49.69	873.39	933.27	334.14	143.83	281.32	+ 2	− 9
7	151.33	89.07	49.31	873.47	933.65	334.06	144.12	281.23	+ 5	− 6
8	−151.71	+89.15	+48.93	+873.55	−934.03	−333.98	−144.41	−281.14	+ 7	− 2
9	152.09	89.22	48.55	873.62	934.41	333.91	144.70	281.06	+ 7	+ 3
10	152.47	89.29	48.17	873.69	934.79	333.84	144.99	280.98	+ 6	+ 6
11	152.85	89.35	47.79	873.75	935.17	333.78	145.29	280.91	+ 3	+ 9
12	153.23	89.41	47.41	873.81	935.55	333.72	145.59	280.85	0	+10
13	−153.62	+89.47	+47.02	+873.86	−935.93	−333.67	−145.89	−280.79	− 3	+ 9
14	154.01	89.52	46.63	873.91	936.32	333.62	146.19	280.74	− 5	+ 7
15	−154.40	+89.56	+46.24	+873.95	−936.71	−333.58	−146.49	−280.69	− 7	+ 3
Mittl. Ort	−139.29	+79.22	+61.50	+863.61	−921.73	−343.78	−167.19	−307.49		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12^{h} Sternzeit Greenwich

Tag	BD +89° 1 Gr. $10^{m}.56$		BD +89° 3 Gr. $9^{m}.06$		BD +89° 37 Gr. $10^{m}.06$		CPD −89° 38 Gr. $9^{m}.5$		Kurzperiod. Nutationsgl.*)	
1933	x ″	y ″	x ″	y ″	x ″	y ″	x ″	y ″	in ″0.01	
Sept. 15	−154.40	+89.56	+46.24	+873.95	−936.71	−333.58	−146.49	−280.69	− 7	+ 3
16	154.79	89.60	45.85	873.99	937.10	333.54	146.79	280.65	− 7	− 1
17	155.18	89.64	45.46	874.03	937.49	333.50	147.09	280.61	− 6	− 5
18	155.57	89.67	45.07	874.06	937.88	333.47	147.39	280.58	− 3	− 9
19	155.96	89.69	44.68	874.09	938.27	333.44	147.69	280.56	+ 1	−10
20	−156.35	+89.71	+44.28	+874.11	−938.67	−333.42	−147.99	−280.54	+ 5	−10
21	156.74	89.73	43.89	874.13	939.07	333.40	148.29	280.53	+ 8	− 8
22	157.13	89.74	43.50	874.14	939.46	333.39	148.59	280.53	+11	− 3
23	157.52	89.75	43.11	874.15	939.85	333.38	148.89	280.53	+11	+ 2
24	157.91	89.75	42.72	874.15	940.24	333.38	149.20	280.54	+ 8	+ 7
25	−158.30	+89.75	+42.33	+874.15	−940.63	−333.38	−149.51	−280.55	+ 4	+10
26	158.69	89.74	41.94	874.14	941.02	333.39	149.82	280.57	− 1	+11
27	159.08	89.72	41.55	874.13	941.41	333.41	150.13	280.59	− 6	+ 9
28	159.48	89.70	41.16	874.11	941.80	333.43	150.44	280.62	−10	+ 5
29	159.88	89.68	40.77	874.09	942.19	333.45	150.75	280.66	−11	0
30	−160.27	+89.65	+40.38	+874.06	−942.58	−333.48	−151.06	−280.70	−10	− 5
Okt. 1	160.66	89.62	39.99	874.03	942.97	333.51	151.36	280.75	− 8	− 9
2	161.05	89.59	39.60	874.00	943.36	333.54	151.66	280.81	− 4	−11
3	161.44	89.55	39.21	873.96	943.75	333.58	151.96	280.87	+ 1	−10
4	161.83	89.50	38.82	873.91	944.14	333.63	152.26	280.94	+ 4	− 8
5	−162.22	+89.45	+38.43	+873.86	−944.53	−333.68	−152.56	−281.02	+ 7	− 4
6	162.61	89.39	38.04	873.80	944.92	333.74	152.86	281.10	+ 7	+ 1
7	163.00	89.33	37.65	873.74	945.31	333.80	153.16	281.18	+ 7	+ 5
8	163.38	89.26	37.26	873.67	945.69	333.87	153.46	281.27	+ 5	+ 8
9	163.76	89.19	36.88	873.60	946.07	333.94	153.75	281.37	+ 2	+10
10	−164.14	+89.12	+36.49	+873.53	−946.46	−334.02	−154.05	−281.47	− 1	+10
11	164.52	89.04	36.11	873.45	946.84	334.10	154.34	281.58	− 4	+ 8
12	164.90	88.95	35.73	873.36	947.22	334.18	154.63	281.70	− 6	+ 5
13	165.28	88.86	35.35	873.27	947.60	334.27	154.92	281.82	− 7	+ 1
14	165.66	88.77	34.97	873.18	947.98	334.37	155.20	281.95	− 6	− 4
15	−166.04	+88.67	+34.59	+873.08	−948.36	−334.47	−155.48	−282.09	− 4	− 7
16	166.42	88.56	34.21	872.97	948.73	334.57	155.76	282.23	0	−10
17	166.79	88.45	33.84	872.86	949.10	334.68	156.04	282.37	+ 4	−10
18	167.16	88.34	33.47	872.75	949.47	334.80	156.31	282.52	+ 7	− 9
19	167.53	88.22	33.10	872.63	949.84	334.92	156.58	282.68	+10	− 5
20	−167.90	+88.10	+32.73	+872.51	−950.21	−335.05	−156.85	−282.84	+11	0
21	168.27	87.97	32.36	872.38	950.58	335.18	157.11	283.01	+ 9	+ 5
22	−168.63	+ 87.84	+32.00	+872.25	−950.94	−335.31	−157.37	−283.19	+ 6	+ 9
Mittl. Ort	″ −139.29	″ +79.22	″ +61.50	″ +863.61	″ −921.73	″ −343.78	″ −167.19	″ −307.49		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12^h Sternzeit Greenwich

Tag	BD +89° 1 Gr. 10.56		BD +89° 3 Gr. 9.06		BD +89° 37 Gr. 10.06		CPD −89° 38 Gr. 9.5		Kurzperiod. Nutationsgl.*)	
1933	x	y	x	y	x	y	x	y	in 0.01"	
Okt. 22	−168.63	+87.84	+32.00	+872.25	−950.94	−335.31	−157.37	−283.19	+ 6	+ 9
23	168.99	87.70	31.64	872.11	951.30	335.45	157.63	283.37	+ 1	+11
24	169.35	87.56	31.28	871.97	951.66	335.59	157.89	283.55	− 5	+10
25	169.71	87.41	30.92	871.82	952.02	335.74	158.14	283.74	− 9	+ 7
26	170.06	87.26	30.57	871.67	952.37	335.89	158.39	283.94	−11	+ 2
27	−170.41	+87.10	+30.22	+871.51	−952.72	−336.05	−158.63	−284.14	−12	− 3
28	170.76	86.94	29.87	871.35	953.07	336.21	158.87	284.34	−10	− 8
29	171.10	86.78	29.53	871.19	953.41	336.37	159.11	284.55	− 6	−10
30	171.44	86.61	29.19	871.02	953.75	336.54	159.34	284.77	− 1	−11
31	171.78	86.44	28.85	870.85	954.09	336.71	159.57	284.99	+ 3	− 9
Nov. 1	−172.12	+86.26	+28.51	+870.67	−954.43	−336.89	−159.79	−285.21	+ 6	− 5
2	172.46	86.08	28.17	870.49	954.77	337.07	160.01	285.44	+ 7	− 1
3	172.79	85.89	27.84	870.30	955.10	337.26	160.23	285.67	+ 7	+ 3
4	173.12	85.70	27.51	870.11	955.43	337.45	160.44	285.91	+ 5	+ 7
5	173.44	85.50	27.19	869.92	955.75	337.65	160.65	286.15	+ 3	+ 9
6	−173.76	+85.30	+26.87	+869.72	−956.07	−337.85	−160.85	−286.40	0	+10
7	174.08	85.10	26.55	869.52	956.39	338.05	161.05	286.65	− 3	+ 9
8	174.39	84.89	26.24	869.31	956.70	338.26	161.24	286.91	− 5	+ 6
9	174.70	84.68	25.93	869.10	957.01	338.47	161.43	287.17	− 6	+ 2
10	175.01	84.46	25.62	868.88	957.32	338.69	161.61	287.44	− 6	− 2
11	−175.31	+84.24	+25.32	+868.66	−957.62	−338.91	−161.79	−287.71	− 4	− 6
12	175.61	84.01	25.02	868.43	957.92	339.14	161.96	287.98	− 1	− 9
13	175.90	83.78	24.73	868.20	958.21	339.37	162.12	288.25	+ 3	−10
14	176.19	83.55	24.44	867.97	958.50	339.60	162.28	288.53	+ 7	− 9
15	176.48	83.32	24.15	867.74	958.79	339.84	162.44	288.81	+10	− 6
16	−176.76	+83.08	+23.87	+867.50	−959.07	−340.08	−162.59	−289.10	+11	− 2
17	177.04	82.84	23.59	867.26	959.35	340.32	162.74	289.39	+11	+ 3
18	177.31	82.59	23.32	867.01	959.62	340.57	162.88	289.68	+ 8	+ 8
19	177.58	82.34	23.05	866.76	959.89	340.82	163.02	289.98	+ 3	+10
20	177.84	82.09	22.79	866.51	960.15	341.08	163.15	290.28	− 2	+11
21	−178.10	+81.83	+22.53	+866.25	−960.41	−341.34	−163.27	−290.58	− 7	+ 9
22	178.36	81.57	22.27	865.99	960.67	341.60	163.39	290.88	−11	+ 4
23	178.61	81.30	22.02	865.72	960.92	341.86	163.50	291.19	−12	− 1
24	178.85	81.03	21.78	865.45	961.16	342.13	163.60	291.50	−11	− 6
25	179.09	80.76	21.54	865.18	961.40	342.40	163.70	291.81	− 8	−10
26	−179.32	+80.49	+21.30	+864.91	−961.63	−342.68	−163.79	−292.13	− 4	−11
27	179.55	80.21	21.07	864.63	961.86	342.96	163.87	292.45	+ 1	−10
28	−179.77	+79.93	+20.85	+864.35	−962.08	−343.24	−163.95	−292.77	+ 5	− 7
Mittl. Ort	−139.29	+79.22	+61.50	+863.61	−921.73	−343.78	−167.19	−307.49		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Polnahe Sterne 1933

Scheinbare Koordinaten für 12^h Sternzeit Greenwich

Tag	BD +89° 1 Gr. $10^m.56$		BD +89° 3 Gr. $9^m.06$		BD +89° 37 Gr. $10^m.06$		CPD −89° 38 Gr. $9^m.5$		Kurzperiod. Nutationsgl.*)	
1933	x	y	x	y	x	y	x	y	in 0.″01	
Nov. 28	−179.″77	+79.″93	+20.″85	+864.″35	−962.″08	−343.″24	−163.″95	−292.″77	+ 5	− 7
29	179.99	79.65	20.63	864.07	962.30	343.52	164.02	293.09	+ 7	− 3
30	180.20	79.36	20.41	863.78	962.51	343.81	164.09	293.42	+ 7	+ 2
Dez. 1	180.41	79.07	20.20	863.49	962.72	344.10	164.15	293.75	+ 6	+ 6
2	180.61	78.78	20.00	863.20	962.92	344.39	164.21	294.08	+ 4	+ 9
3	−180.81	+78.49	+19.80	+862.91	−963.12	−344.68	−164.25	−294.41	+ 1	+10
4	181.00	78.19	19.61	862.61	963.31	344.98	164.29	294.74	− 2	+ 9
5	181.19	77.89	19.42	862.31	963.50	345.28	164.33	295.07	− 5	+ 7
6	181.37	77.59	19.24	862.01	963.68	345.58	164.36	295.40	− 6	+ 4
7	181.54	77.28	19.07	861.71	963.85	345.89	164.38	295.73	− 7	0
8	−181.71	+76.97	+18.90	+861.40	−964.02	−346.20	−164.39	−296.06	− 5	− 4
9	181.87	76.66	18.74	861.09	964.18	346.51	164.40	296.39	− 3	− 8
10	182.03	76.35	18.58	860.78	964.34	346.82	164.40	296.73	+ 1	−10
11	182.18	76.04	18.43	860.47	964.49	347.14	164.39	297.07	+ 5	−10
12	182.32	75.73	18.29	860.16	964.63	347.46	164.38	297.41	+ 9	− 8
13	−182.46	+75.42	+18.15	+859.85	−964.77	−347.78	−164.36	−297.75	+12	− 4
14	182.59	75.10	18.01	859.53	964.91	348.10	164.34	298.09	+12	+ 1
15	182.72	74.78	17.88	859.21	965.04	348.42	164.31	298.43	+10	+ 6
16	182.84	74.46	17.76	858.89	965.16	348.74	164.28	298.77	+ 6	+10
17	182.95	74.14	17.65	858.57	965.27	349.06	164.24	299.11	0	+11
18	−183.06	+73.81	+17.54	+858.25	−965.38	−349.38	−164.19	−299.45	− 5	+10
19	183.16	73.49	17.44	857.93	965.48	349.70	164.14	299.79	− 9	+ 6
20	183.26	73.17	17.34	857.61	965.58	350.03	164.08	300.13	−12	+ 1
21	183.35	72.84	17.25	857.29	965.67	350.36	164.01	300.47	−12	− 4
22	183.43	72.51	17.17	856.96	965.75	350.69	163.93	300.81	−10	− 8
23	−183.51	+72.18	+17.09	+856.63	−965.83	−351.02	−163.85	−301.15	− 6	−11
24	183.58	71.85	17.02	856.30	965.90	351.35	163.76	301.49	− 1	−10
25	183.64	71.52	16.96	855.97	965.96	351.68	163.67	301.83	+ 3	− 8
26	183.70	71.19	16.90	855.64	966.02	352.01	163.57	302.16	+ 6	− 4
27	183.75	70.86	16.85	855.31	966.07	352.34	163.46	302.49	+ 7	0
28	−183.79	+70.53	+16.81	+854.98	−966.11	−352.67	−163.34	−302.82	+ 6	+ 5
29	183.83	70.21	16.77	854.65	966.15	353.00	163.22	303.15	+ 4	+ 8
30	183.86	69.88	16.74	854.32	966.18	353.33	163.10	303.48	+ 1	+10
31	183.88	69.55	16.72	853.99	966.20	353.66	162.97	303.81	− 2	+10
32	−183.90	+69.22	+16.70	+853.66	−966.22	−353.99	−162.83	−304.14	− 4	+ 8
Mittl. Ort	−139.″29	+79.″22	+61.″50	+863.″61	−921.″73	−343.″78	−167.″19	−307.″49		

*) Die Vorzeichen gelten für die drei nördlichen Sterne, für den südlichen sind sie umzukehren.

Formeln

zur Reduktion auf den scheinbaren Ort

$$A = t - (0.34215 + 0.00031\,T) \sin \Omega + 0.00415 \sin 2\Omega - 0.02526 \sin 2L_\odot$$
$$+ 0.00251 \sin M_\odot - 0.00099 \sin (2L_\odot + M_\odot) + 0.00042 \sin (2L_\odot - M_\odot)$$
$$+ 0.00025 \sin (2L_\odot - \Omega)$$

$$A' = -0.00405 \sin 2L_☾ + 0.00135 \sin M_☾ - 0.00068 \sin (2L_☾ - \Omega)$$
$$- 0.00052 \sin (2L_☾ + M_☾) + 0.00030 \sin (2L_☾ - 2L_\odot - M_☾)$$
$$+ 0.00023 \sin (2L_☾ - M_☾) + 0.00012 \sin (2L_☾ - 2L_\odot)$$

$$B = -(9''.210 + 0''.001\,T) \cos \Omega + 0''.090 \cos 2\Omega - 0''.551 \cos 2L_\odot$$
$$- 0''.022 \cos (2L_\odot + M_\odot) + 0''.009 \cos (2L_\odot - M_\odot)$$
$$+ 0''.007 \cos (2L_\odot - \Omega)$$

$$B' = -0''.089 \cos 2L_☾ - 0''.018 \cos (2L_☾ - \Omega) - 0''.011 \cos (2L_☾ + M_☾)$$
$$+ 0''.005 \cos (2L_☾ - M_☾)$$

$$C = -20''.47 \cos \odot \cos \varepsilon$$

$$D = -20''.47 \sin \odot$$

$$E = -(0^s.0029 - 0^s.0004\,T) \sin \Omega$$

T Zeit seit 1900.0 in Einheiten von 100 tropischen Jahren,
t Zeit seit Beginn des annus fictus in Bruchteilen des tropischen Jahres;
$t = 0$ für 1933 Januar $0^d.8060$ Welt-Zeit.

$a = m + {}^1/_{15}\, n \sin \alpha \operatorname{tg} \delta$	$a' = n \cos \alpha$
$b = {}^1/_{15} \cos \alpha \operatorname{tg} \delta$	$b' = -\sin \alpha$
$c = {}^1/_{15} \cos \alpha \sec \delta$	$c' = \operatorname{tg} \varepsilon \cos \delta - \sin \alpha \sin \delta$
$d = {}^1/_{15} \sin \alpha \sec \delta$	$d' = \cos \alpha \sin \delta$

Für 1933.0 gilt: $m = +3^s.0729$, $n = +20''.044$, $\varepsilon = 23^\circ\ 26'\ 52''.81$

$$\alpha_{app.} = \alpha_{1933.0} + t\mu_\alpha + Aa + Bb + Cc + Dd + E + [A'a + B'b]$$
$$\delta_{app.} = \delta_{1933.0} + t\mu_\delta + Aa' + Bb' + Cc' + Dd' + [A'a' + B'b']$$

μ_α, μ_δ jährliche Eigenbewegung in Rektaszension, bez. Deklination.

Setzt man

$f = mA + E$	$f' = mA'$	$i = C \operatorname{tg} \varepsilon$
$g \sin G = B$	$g' \sin G' = B'$	$h \sin H = C$
$g \cos G = nA$	$g' \cos G' = nA'$	$h \cos H = D,$

so wird:

$$\alpha_{app.} = \alpha_{1933.0} + t\mu_\alpha + f + {}^1/_{15}\, g \sin (G + \alpha) \operatorname{tg} \delta + {}^1/_{15}\, h \sin (H + \alpha) \sec \delta$$
$$+ [f' + {}^1/_{15}\, g' \sin (G' + \alpha) \operatorname{tg} \delta]$$

$$\delta_{app.} = \delta_{1933.0} + t\mu_\delta + g \cos (G + \alpha) + h \cos (H + \alpha) \sin \delta + i \cos \delta$$
$$+ [g' \cos (G' + \alpha)]$$

Reduktionsgrößen 1933

für 12^h Sternzeit Greenwich

Welt-Zeit	t	log A	log B	log C	log D	E
1933	a					s
Jan. 1.2	+0.0011	9.07759	0.90902$_n$	0.52905$_n$	1.30393	+0.0008
11.2	0.0284	9.19844	0.91291$_n$	0.81869$_n$	1.28258	09
21.2	0.0557	9.28820	0.91939$_n$	0.98159$_n$	1.24554	09
31.1	0.0830	9.35727	0.92747$_n$	1.08909$_n$	1.18999	10
Febr. 10.1	0.1104	9.41159	0.93581$_n$	1.16376$_n$	1.11056	10
20.1	0.1377	9.45516	0.94330$_n$	1.21550$_n$	0.99660	+0.0010
März 2.1	0.1650	9.49107	0.94880$_n$	1.24942$_n$	0.82302	10
12.0	0.1923	9.52170	0.95168$_n$	1.26827$_n$	0.50501	11
22.0	0.2196	9.54915	0.95148$_n$	1.27360$_n$	9.52244$_n$	11
April 1.0	0.2469	9.57505	0.94807$_n$	1.26588$_n$	0.58377$_n$	11
10.9	0.2742	9.60065	0.94166$_n$	1.24494$_n$	0.85763$_n$	+0.0011
20.9	0.3015	9.62672	0.93273$_n$	1.20957$_n$	1.01477$_n$	11
30.9	0.3288	9.65368	0.92210$_n$	1.15749$_n$	1.11975$_n$	12
Mai 10.9	0.3561	9.68153	0.91078$_n$	1.08422$_n$	1.19357$_n$	12
20.8	0.3834	9.70996	0.89960$_n$	0.98127$_n$	1.24566$_n$	12
30.8	0.4107	9.73849	0.88981$_n$	0.82982$_n$	1.28096$_n$	+0.0012
Juni 9.8	0.4380	9.76655	0.88224$_n$	0.57507$_n$	1.30220$_n$	12
19.8	0.4653	9.79359	0.87766$_n$	9.82151$_n$	1.31082$_n$	13
29.7	0.4926	9.81917	0.87628$_n$	0.38881	1.30739$_n$	13
Juli 9.7	0.5199	9.84287	0.87818$_n$	0.73949	1.29170$_n$	13
19.7	0.5472	9.86447	0.88275$_n$	0.92330	1.26285$_n$	+0.0013
29.6	0.5745	9.88385	0.88925$_n$	1.04320	1.21888$_n$	13
Aug. 8.6	0.6018	9.90102	0.89669$_n$	1.12753	1.15609$_n$	14
18.6	0.6291	9.91613	0.90401$_n$	1.18786	1.06793$_n$	14
28.6	0.6564	9.92941	0.91020$_n$	1.23014	0.94062$_n$	14
Sept. 7.5	0.6837	9.94124	0.91424$_n$	1.25744	0.73965$_n$	+0.0014
17.5	0.7110	9.95202	0.91551$_n$	1.27138	0.31952$_n$	14
27.5	0.7383	9.96226	0.91355$_n$	1.27263	0.14457	15
Okt. 7.5	0.7657	9.97242	0.90816$_n$	1.26107	0.68637	15
17.4	0.7930	9.98296	0.89955$_n$	1.23570	0.91350	15
27.4	0.8203	9.99422	0.88829$_n$	1.19460	1.05331	+0.0015
Nov. 6.4	0.8476	0.00639	0.87489$_n$	1.13414	1.14900	15
16.3	0.8749	0.01953	0.86082$_n$	1.04759	1.21651	16
26.3	0.9022	0.03349	0.84745$_n$	0.92132	1.26333	16
Dez. 6.3	0.9295	0.04800	0.83601$_n$	0.72107	1.29334	16
16.3	0.9568	0.06271	0.82795$_n$	0.30211	1.30861	+0.0016
26.2	0.9841	0.07719	0.82419$_n$	0.12024$_n$	1.31001	16
36.2	1.0114	0.09105	0.82478$_n$	0.66314$_n$	1.29765	+0.0017

Reduktionsgrößen 1933

Tag		0ʰ Welt-Zeit							
	Sternzeit Greenw.	*t*	*f*	log *g*	*G*	log *h*	*H*	log *i*	*i*
1933	h	s	s		h m		h m		"
Jan. 0	6.6	−0.0022	+0.353	0.9256	19 3.4	1.3102	23 26.5	0.1113*n*	−1.292
1	6.7	+0.0005	0.366	0.9270	19 5.4	1.3100	23 22.7	0.1569*n*	1.435
2	6.7	0.0033	0.378	0.9283	19 7.4	1.3098	23 19.0	0.1981*n*	1.578
3	6.8	0.0060	0.390	0.9297	19 9.4	1.3096	23 15.2	0.2353*n*	1.719
4	6.8	0.0087	0.402	0.9312	19 11.3	1.3093	23 11.4	0.2695*n*	1.860
5	6.9	0.0115	0.414	0.9327	19 13.3	1.3090	23 7.6	0.3013*n*	2.001
6	7.0	0.0142	+0.425	0.9343	19 15.2	1.3087	23 3.9	0.3306*n*	−2.141
7	7.1	0.0170	0.437	0.9359	19 17.1	1.3084	23 0.1	0.3581*n*	2.281
8	7.1	0.0197	0.449	0.9375	19 18.9	1.3081	22 56.3	0.3838*n*	2.420
9	7.2	0.0224	0.461	0.9393	19 20.7	1.3077	22 52.5	0.4079*n*	2.558
10	7.3	0.0252	0.472	0.9411	19 22.5	1.3073	22 48.7	0.4306*n*	2.695
11	7.3	0.0279	0.484	0.9429	19 24.3	1.3069	22 44.9	0.4519*n*	2.831
12	7.4	0.0306	+0.496	0.9447	19 26.0	1.3065	22 41.1	0.4722*n*	−2.966
13	7.5	0.0334	0.507	0.9465	19 27.7	1.3061	22 37.2	0.4914*n*	3.100
14	7.5	0.0361	0.518	0.9484	19 29.4	1.3056	22 33.4	0.5097*n*	3.234
15	7.6	0.0389	0.530	0.9503	19 31.0	1.3052	22 29.6	0.5271*n*	3.366
16	7.7	0.0416	0.541	0.9522	19 32.6	1.3047	22 25.7	0.5438*n*	3.498
17	7.7	0.0443	0.552	0.9542	19 34.2	1.3042	22 21.9	0.5597*n*	3.628
18	7.8	0.0471	+0.563	0.9561	19 35.7	1.3037	22 18.0	0.5748*n*	−3.757
19	7.9	0.0498	0.574	0.9581	19 37.3	1.3032	22 14.1	0.5894*n*	3.885
20	7.9	0.0526	0.585	0.9601	19 38.7	1.3026	22 10.3	0.6033*n*	4.011
21	8.0	0.0553	0.596	0.9621	19 40.2	1.3021	22 6.4	0.6167*n*	4.137
22	8.1	0.0580	0.607	0.9641	19 41.6	1.3015	22 2.5	0.6295*n*	4.261
23	8.1	0.0608	0.617	0.9662	19 43.0	1.3009	21 58.6	0.6418*n*	4.383
24	8.2	0.0635	+0.628	0.9683	19 44.4	1.3003	21 54.7	0.6536*n*	−4.504
25	8.3	0.0662	0.638	0.9703	19 45.7	1.2997	21 50.7	0.6650*n*	4.624
26	8.3	0.0690	0.649	0.9724	19 47.0	1.2991	21 46.8	0.6761*n*	4.743
27	8.4	0.0717	0.659	0.9745	19 48.3	1.2985	21 42.8	0.6866*n*	4.859
28	8.5	0.0745	0.669	0.9766	19 49.6	1.2979	21 38.9	0.6967*n*	4.974
29	8.5	0.0772	0.679	0.9786	19 50.8	1.2973	21 34.9	0.7066*n*	5.088
30	8.6	0.0799	+0.689	0.9806	19 52.0	1.2966	21 30.9	0.7160*n*	−5.200
31	8.7	0.0827	0.699	0.9827	19 53.2	1.2960	21 26.9	0.7251*n*	5.310
Febr. 1	8.7	0.0854	0.709	0.9847	19 54.3	1.2953	21 22.9	0.7339*n*	5.419
2	8.8	0.0881	0.719	0.9867	19 55.5	1.2947	21 18.9	0.7424*n*	5.526
3	8.8	0.0909	0.728	0.9887	19 56.6	1.2940	21 14.9	0.7506*n*	5.631
4	8.9	0.0936	0.738	0.9907	19 57.6	1.2934	21 10.9	0.7585*n*	5.734
5	9.0	0.0964	+0.747	0.9926	19 58.7	1.2927	21 6.8	0.7660*n*	−5.835
6	9.0	0.0991	0.757	0.9946	19 59.7	1.2921	21 2.8	0.7734*n*	5.935
7	9.1	0.1018	0.766	0.9965	20 0.7	1.2914	20 58.7	0.7805*n*	6.033
8	9.2	0.1046	0.775	0.9985	20 1.7	1.2907	20 54.6	0.7874*n*	6.129
9	9.2	0.1073	0.784	1.0004	20 2.7	1.2901	20 50.6	0.7940*n*	6.223
10	9.3	0.1100	+0.793	1.0023	20 3.7	1.2894	20 46.5	0.8003*n*	−6.314

Tag	0h Welt-Zeit										
	f′	g′	G′	Allgemeine Präzession seit 1933.0	Δψ	Δψ′	Wahre Schiefe	Δε	Δε′	j	k
1933	s in 0.001	" in 0.01	h	"	"	" in 0.01	23° 27′ "	"	" in 0.01	in 0.001	
Jan. 0	+18	+13	22.9	−0.11	+5.89	+30	0.94	+8.11	+ 4	37	89
1	+15	12	21.4	+0.03	5.95	+24	0.99	8.11	+ 8	37	89
2	+ 9	12	20.0	0.16	6.01	+15	1.01	8.11	+10	37	89
3	+ 2	10	18.5	0.30	6.07	+ 4	1.02	8.12	+10	37	89
4	− 4	9	16.9	0.44	6.13	− 6	1.01	8.12	+ 9	37	89
5	− 9	8	14.9	0.58	6.19	−14	0.98	8.13	+ 5	37	89
6	−11	+ 8	12.7	+0.71	+6.24	−19	0.95	+8.14	+ 1	37	89
7	−12	8	10.7	0.85	6.30	−19	0.91	8.14	− 3	38	89
8	−10	9	9.0	0.99	6.35	−17	0.88	8.15	− 7	38	89
9	− 6	10	7.7	1.13	6.41	−11	0.86	8.16	− 9	38	89
10	− 2	10	6.5	1.27	6.46	− 3	0.86	8.17	−10	38	88
11	+ 3	10	5.1	1.40	6.51	+ 6	0.88	8.18	− 9	38	88
12	+ 8	+ 8	3.5	+1.54	+6.56	+13	0.91	+8.19	− 7	38	88
13	+10	7	1.4	1.68	6.61	+17	0.96	8.20	− 3	39	88
14	+11	7	22.9	1.82	6.66	+17	1.02	8.21	+ 2	39	88
15	+ 8	8	20.6	1.95	6.71	+13	1.07	8.22	+ 7	39	88
16	+ 3	10	18.7	2.09	6.76	+ 5	1.12	8.24	+10	39	88
17	− 4	11	17.1	2.23	6.80	− 6	1.14	8.25	+11	39	88
18	−10	+12	15.7	+2.37	+6.84	−17	1.14	+8.26	+10	39	88
19	−15	12	14.1	2.50	6.89	−25	1.11	8.28	+ 6	40	88
20	−17	11	12.3	2.64	6.93	−28	1.07	8.29	+ 1	40	88
21	−15	11	10.4	2.78	6.97	−25	1.03	8.30	− 4	40	87
22	−10	11	8.4	2.92	7.01	−16	1.00	8.32	− 9	40	87
23	− 2	11	6.5	3.05	7.04	− 4	0.99	8.33	−11	40	87
24	+ 6	+11	4.7	+3.19	+7.08	+10	1.01	+8.35	−11	40	87
25	+13	11	2.8	3.33	7.11	+21	1.06	8.36	− 8	41	87
26	+17	12	1.0	3.47	7.14	+28	1.12	8.38	− 3	41	87
27	+18	12	23.3	3.60	7.18	+29	1.18	8.39	+ 2	41	87
28	+15	12	21.8	3.74	7.20	+25	1.24	8.41	+ 7	41	87
29	+10	12	20.3	3.88	7.23	+17	1.29	8.43	+10	41	86
30	+ 4	+11	18.9	+4.02	+7.26	+ 6	1.31	+8.44	+11	42	86
31	− 2	9	17.3	4.16	7.28	− 4	1.32	8.46	+ 9	42	86
Febr. 1	− 8	8	15.5	4.29	7.30	−13	1.30	8.48	+ 7	42	86
2	−11	8	13.4	4.43	7.33	−18	1.28	8.49	+ 3	42	86
3	−12	8	11.2	4.57	7.35	−20	1.25	8.51	− 2	42	86
4	−11	9	9.4	4.71	7.36	−18	1.23	8.53	− 6	43	86
5	− 8	+10	8.0	+4.84	+7.38	−13	1.21	+8.54	− 8	43	86
6	− 3	10	6.8	4.98	7.39	− 5	1.21	8.56	−10	43	85
7	+ 2	10	5.5	5.12	7.41	+ 3	1.23	8.57	−10	43	85
8	+ 6	9	4.1	5.26	7.42	+11	1.27	8.59	− 8	43	85
9	+10	8	2.1	5.39	7.43	+16	1.32	8.61	− 4	44	85
10	+11	+ 7	23.7	+5.53	+7.44	+18	1.38	+8.62	+ 1	44	85

Reduktionsgrößen 1933

Tag	0ʰ Welt-Zeit								
	Sternzeit Greenw.	t	f	log g	G	log h	H	log i	i
1933	h	s	s		h m		h m		"
Febr. 10	9.3	0.1100	+0.793	1.0023	20 3.7	1.2894	20 46.5	0.8003_n	−6.314
11	9.4	0.1128	0.802	1.0041	20 4.6	1.2887	20 42.4	0.8065_n	6.404
12	9.4	0.1155	0.810	1.0060	20 5.5	1.2881	20 38.2	0.8124_n	6.492
13	9.5	0.1183	0.819	1.0078	20 6.4	1.2875	20 34.1	0.8181_n	6.578
14	9.6	0.1210	0.828	1.0096	20 7.3	1.2868	20 30.0	0.8236_n	6.662
15	9.6	0.1237	0.836	1.0114	20 8.2	1.2862	20 25.8	0.8289_n	6.743
16	9.7	0.1265	+0.844	1.0132	20 9.0	1.2855	20 21.6	0.8339_n	−6.822
17	9.8	0.1292	0.853	1.0149	20 9.8	1.2849	20 17.5	0.8389_n	6.900
18	9.8	0.1320	0.861	1.0166	20 10.7	1.2843	20 13.3	0.8435_n	6.975
19	9.9	0.1347	0.869	1.0183	20 11.5	1.2837	20 9.1	0.8481_n	7.048
20	10.0	0.1374	0.877	1.0199	20 12.3	1.2831	20 4.9	0.8524_n	7.118
21	10.0	0.1402	0.885	1.0216	20 13.0	1.2825	20 0.7	0.8566_n	7.187
22	10.1	0.1429	+0.893	1.0232	20 13.8	1.2820	19 56.5	0.8606_n	−7.254
23	10.2	0.1456	0.900	1.0248	20 14.6	1.2814	19 52.2	0.8644_n	7.318
24	10.2	0.1484	0.908	1.0263	20 15.4	1.2809	19 48.0	0.8681_n	7.380
25	10.3	0.1511	0.916	1.0278	20 16.1	1.2804	19 43.8	0.8715_n	7.439
26	10.4	0.1539	0.923	1.0293	20 16.8	1.2799	19 39.5	0.8748_n	7.496
27	10.4	0.1566	0.931	1.0308	20 17.6	1.2794	19 35.2	0.8780_n	7.550
28	10.5	0.1593	+0.938	1.0323	20 18.3	1.2789	19 31.0	0.8810_n	−7.603
März 1	10.6	0.1621	0.945	1.0337	20 19.0	1.2784	19 26.7	0.8838_n	7.653
2	10.6	0.1648	0.953	1.0351	20 19.7	1.2780	19 22.4	0.8866_n	7.701
3	10.7	0.1675	0.960	1.0364	20 20.4	1.2776	19 18.1	0.8891_n	7.746
4	10.8	0.1703	0.967	1.0377	20 21.1	1.2772	19 13.8	0.8915_n	7.789
5	10.8	0.1730	0.974	1.0390	20 21.8	1.2768	19 9.5	0.8937_n	7.829
6	10.9	0.1758	+0.981	1.0403	20 22.5	1.2764	19 5.2	0.8958_n	−7.867
7	11.0	0.1785	0.988	1.0416	20 23.2	1.2761	19 0.9	0.8978_n	7.903
8	11.0	0.1812	0.995	1.0428	20 23.9	1.2758	18 56.6	0.8996_n	7.936
9	11.1	0.1840	1.002	1.0440	20 24.6	1.2755	18 52.3	0.9013_n	7.967
10	11.1	0.1867	1.009	1.0451	20 25.3	1.2752	18 47.9	0.9028_n	7.995
11	11.2	0.1894	1.016	1.0463	20 26.0	1.2749	18 43.6	0.9043_n	8.022
12	11.3	0.1922	+1.022	1.0474	20 26.7	1.2747	18 39.3	0.9055_n	−8.045
13	11.3	0.1949	1.029	1.0485	20 27.4	1.2745	18 34.9	0.9067_n	8.066
14	11.4	0.1977	1.036	1.0496	20 28.1	1.2743	18 30.6	0.9076_n	8.084
15	11.5	0.2004	1.043	1.0507	20 28.8	1.2741	18 26.3	0.9085_n	8.101
16	11.5	0.2031	1.049	1.0517	20 29.5	1.2740	18 21.9	0.9092_n	8.114
17	11.6	0.2059	1.056	1.0528	20 30.2	1.2739	18 17.6	0.9099_n	8.126
18	11.7	0.2086	+1.063	1.0538	20 30.9	1.2738	18 13.3	0.9103_n	−8.134
19	11.7	0.2113	1.069	1.0547	20 31.6	1.2737	18 8.9	0.9107_n	8.141
20	11.8	0.2141	1.076	1.0557	20 32.3	1.2737	18 4.6	0.9108_n	8.144
21	11.9	0.2168	1.083	1.0566	20 33.0	1.2737	18 0.3	0.9109_n	8.146
22	11.9	0.2196	1.089	1.0576	20 33.8	1.2737	17 56.0	0.9108_n	8.144
23	12.0	0.2223	+1.096	1.0585	20 34.5	1.2737	17 51.6	0.9107_n	−8.141

Tag	0h Welt-Zeit										
	f'	g'	G'	Allgemeine Präzession seit 1933.0	$\Delta\psi$	$\Delta\psi'$	Wahre Schiefe	$\Delta\varepsilon$	$\Delta\varepsilon'$	j	k
1933	s in 0.001	" in 0.01	h	"	"	" in 0.01	23°27' "	"	" in 0.01	in 0.001	
Febr. 10	+11	+ 7	23.7	+ 5.53	+7.44	+18	1.38	+8.62	+ 1	44	85
11	+ 9	8	21.3	5.67	7.44	+15	1.44	8.64	+ 5	44	85
12	+ 5	10	19.4	5.81	7.45	+ 9	1.49	8.66	+ 9	44	85
13	− 1	11	17.8	5.94	7.45	− 1	1.52	8.67	+11	44	85
14	− 7	11	16.3	6.08	7.45	−12	1.53	8.69	+10	45	84
15	−13	11	14.7	6.22	7.45	−21	1.52	8.70	+ 7	45	84
16	−16	+11	13.0	+ 6.36	+7.45	−26	1.49	+8.72	+ 3	45	84
17	−16	10	11.0	6.49	7.45	−25	1.44	8.73	− 3	45	84
18	−11	11	9.0	6.63	7.45	−19	1.41	8.75	− 8	45	84
19	− 5	11	7.1	6.77	7.44	− 7	1.39	8.76	−11	45	84
20	+ 3	11	5.3	6.91	7.43	+ 6	1.40	8.77	−11	46	84
21	+11	11	3.5	7.05	7.43	+18	1.43	8.79	− 9	46	84
22	+16	+11	1.6	+ 7.18	+7.42	+26	1.49	+8.80	− 5	46	83
23	+18	11	23.9	7.32	7.41	+29	1.55	8.81	0	46	83
24	+16	12	22.2	7.46	7.39	+26	1.61	8.83	+ 5	46	83
25	+12	12	20.7	7.60	7.38	+19	1.66	8.84	+ 9	46	83
26	+ 5	11	19.2	7.73	7.37	+ 9	1.68	8.85	+11	47	83
27	− 1	10	17.7	7.87	7.35	− 2	1.69	8.86	+10	47	83
28	− 7	+ 9	16.0	+ 8.01	+7.33	−11	1.67	+8.87	+ 7	47	83
März 1	−11	8	13.9	8.15	7.32	−17	1.64	8.88	+ 4	47	83
2	−12	8	11.8	8.28	7.30	−20	1.61	8.89	0	47	83
3	−12	9	9.9	8.42	7.28	−19	1.57	8.90	− 5	47	83
4	− 9	10	8.5	8.56	7.26	−15	1.55	8.90	− 8	48	83
5	− 5	10	7.2	8.70	7.23	− 8	1.53	8.91	−10	48	82
6	0	+10	6.0	+ 8.83	+7.21	0	1.54	+8.92	−10	48	82
7	+ 5	9	4.6	8.97	7.19	+ 8	1.56	8.93	− 8	48	82
8	+ 9	8	2.9	9.11	7.16	+14	1.59	8.93	− 5	48	82
9	+11	7	0.5	9.25	7.14	+17	1.64	8.94	− 1	48	82
10	+10	7	21.9	9.38	7.11	+16	1.69	8.94	+ 4	48	82
11	+ 6	9	19.9	9.52	7.09	+11	1.73	8.94	+ 8	48	82
12	+ 1	+10	18.3	+ 9.66	+7.06	+ 2	1.76	+8.95	+10	49	82
13	− 5	11	16.8	9.80	7.04	− 8	1.77	8.95	+11	49	82
14	−11	11	15.3	9.94	7.01	−18	1.75	8.95	+ 8	49	82
15	−15	11	13.6	10.07	6.98	−24	1.70	8.95	+ 4	49	82
16	−15	10	11.6	10.21	6.95	−25	1.65	8.95	− 1	49	82
17	−12	10	9.5	10.35	6.92	−20	1.60	8.95	− 6	49	82
18	− 6	+11	7.5	+10.49	+6.89	−10	1.56	+8.95	−10	49	82
19	+ 2	11	5.6	10.62	6.86	+ 3	1.54	8.95	−11	49	82
20	+ 9	11	3.9	10.76	6.84	+15	1.55	8.95	−10	50	82
21	+15	12	2.1	10.90	6.81	+25	1.58	8.95	− 6	50	82
22	+18	12	0.4	11.04	6.78	+29	1.63	8.94	− 1	50	82
23	+17	+12	22.7	+11.17	+6.75	+28	1.67	+8.94	+ 4	50	82

Reduktionsgrößen 1933

Tag	0h Welt-Zeit								
	Sternzeit Greenw.	t	f	log g	G	log h	H	log i	i
1933	h	a	s		h m		h m		"
März 23	12.0	0.2223	+1.096	1.0585	20 34.5	1.2737	17 51.6	0.9107$_n$	−8.141
24	12.1	0.2250	1.103	1.0593	20 35.2	1.2738	17 47.3	0.9104$_n$	8.135
25	12.1	0.2278	1.109	1.0602	20 36.0	1.2739	17 43.0	0.9099$_n$	8.126
26	12.2	0.2305	1.116	1.0611	20 36.7	1.2740	17 38.7	0.9093$_n$	8.115
27	12.3	0.2333	1.123	1.0619	20 37.5	1.2741	17 34.4	0.9086$_n$	8.102
28	12.3	0.2360	1.129	1.0627	20 38.3	1.2743	17 30.1	0.9078$_n$	8.087
29	12.4	0.2387	+1.136	1.0635	20 39.0	1.2744	17 25.8	0.9068$_n$	−8.069
30	12.5	0.2415	1.143	1.0643	20 39.8	1.2746	17 21.5	0.9057$_n$	8.049
31	12.5	0.2442	1.150	1.0651	20 40.6	1.2749	17 17.2	0.9045$_n$	8.026
April 1	12.6	0.2469	1.156	1.0659	20 41.4	1.2751	17 12.9	0.9031$_n$	8.001
2	12.7	0.2497	1.163	1.0667	20 42.2	1.2754	17 8.6	0.9016$_n$	7.973
3	12.7	0.2524	1.170	1.0675	20 43.0	1.2757	17 4.4	0.9000$_n$	7.943
4	12.8	0.2552	+1.177	1.0683	20 43.8	1.2760	17 0.1	0.8982$_n$	−7.911
5	12.9	0.2579	1.184	1.0691	20 44.6	1.2763	16 55.9	0.8964$_n$	7.877
6	12.9	0.2606	1.191	1.0698	20 45.5	1.2767	16 51.7	0.8943$_n$	7.839
7	13.0	0.2634	1.198	1.0706	20 46.3	1.2770	16 47.4	0.8921$_n$	7.800
8	13.1	0.2661	1.205	1.0713	20 47.2	1.2774	16 43.2	0.8898$_n$	7.759
9	13.1	0.2688	1.212	1.0721	20 48.0	1.2778	16 39.0	0.8873$_n$	7.715
10	13.2	0.2716	+1.219	1.0728	20 48.9	1.2783	16 34.8	0.8847$_n$	−7.669
11	13.3	0.2743	1.227	1.0736	20 49.8	1.2787	16 30.6	0.8820$_n$	7.621
12	13.3	0.2771	1.234	1.0743	20 50.7	1.2792	16 26.4	0.8792$_n$	7.571
13	13.4	0.2798	1.241	1.0751	20 51.6	1.2797	16 22.3	0.8762$_n$	7.519
14	13.4	0.2825	1.249	1.0759	20 52.5	1.2801	16 18.1	0.8730$_n$	7.464
15	13.5	0.2853	1.256	1.0766	20 53.4	1.2806	16 14.0	0.8697$_n$	7.408
16	13.6	0.2880	+1.264	1.0774	20 54.3	1.2812	16 9.9	0.8662$_n$	−7.349
17	13.6	0.2907	1.272	1.0782	20 55.2	1.2817	16 5.8	0.8626$_n$	7.288
18	13.7	0.2935	1.279	1.0790	20 56.2	1.2822	16 1.7	0.8588$_n$	7.224
19	13.8	0.2962	1.287	1.0797	20 57.1	1.2828	15 57.6	0.8549$_n$	7.159
20	13.8	0.2990	1.295	1.0805	20 58.1	1.2834	15 53.5	0.8508$_n$	7.092
21	13.9	0.3017	1.303	1.0813	20 59.0	1.2839	15 49.4	0.8465$_n$	7.022
22	14.0	0.3044	+1.311	1.0821	21 0.0	1.2845	15 45.4	0.8420$_n$	−6.951
23	14.0	0.3072	1.319	1.0830	21 0.9	1.2851	15 41.3	0.8375$_n$	6.878
24	14.1	0.3099	1.327	1.0838	21 1.9	1.2857	15 37.3	0.8327$_n$	6.803
25	14.2	0.3127	1.335	1.0847	21 2.9	1.2863	15 33.3	0.8278$_n$	6.726
26	14.2	0.3154	1.344	1.0856	21 3.9	1.2869	15 29.3	0.8226$_n$	6.647
27	14.3	0.3181	1.352	1.0865	21 4.9	1.2875	15 25.3	0.8173$_n$	6.566
28	14.4	0.3209	+1.361	1.0874	21 5.9	1.2882	15 21.4	0.8118$_n$	−6.483
29	14.4	0.3236	1.369	1.0883	21 6.9	1.2888	15 17.4	0.8060$_n$	6.398
30	14.5	0.3263	1.378	1.0892	21 7.9	1.2894	15 13.5	0.8002$_n$	6.312
Mai 1	14.6	0.3291	1.387	1.0902	21 8.9	1.2901	15 9.5	0.7941$_n$	6.224
2	14.6	0.3318	1.395	1.0911	21 10.0	1.2907	15 5.6	0.7877$_n$	6.134
3	14.7	0.3346	+1.404	1.0921	21 11.0	1.2913	15 1.7	0.7813$_n$	−6.043

Tag	0h Welt-Zeit										
	f'	g'	G'	Allgemeine Präzession seit 1933.0	$\Delta\psi$	$\Delta\psi'$	Wahre Schiefe	$\Delta\varepsilon$	$\Delta\varepsilon'$	j	k
1933	s in 0.001	" in 0.01	h	"	"	" in 0.01	23°27' "	"	" in 0.01	in 0.001	
März 23	+17	+12	22.7	+11.17	+6.75	+28	1.67	+8.94	+ 4	50	82
24	+13	12	21.1	11.31	6.72	+22	1.71	8.93	+ 8	50	82
25	+ 7	11	19.6	11.45	6.69	+12	1.73	8.93	+10	50	82
26	+ 1	10	18.1	11.59	6.66	+ 1	1.72	8.92	+10	50	82
27	− 5	9	16.5	11.72	6.63	− 9	1.69	8.91	+ 8	50	82
28	−10	8	14.5	11.86	6.61	−16	1.65	8.91	+ 5	50	82
29	−12	+ 8	12.4	+12.00	+6.58	−20	1.60	+8.90	+ 1	50	82
30	−12	9	10.4	12.14	6.55	−20	1.54	8.89	− 3	51	82
31	−10	10	8.9	12.27	6.52	−16	1.50	8.88	− 7	51	82
April 1	− 6	10	7.6	12.41	6.50	−10	1.47	8.87	− 9	51	82
2	− 2	10	6.4	12.55	6.47	− 3	1.45	8.86	−10	51	82
3	+ 3	9	5.2	12.69	6.45	+ 5	1.44	8.85	− 9	51	82
4	+ 7	+ 8	3.6	+12.83	+6.42	+11	1.46	+8.84	− 6	51	82
5	+ 9	7	1.3	12.96	6.40	+16	1.49	8.83	− 2	51	82
6	+ 9	7	22.5	13.10	6.37	+16	1.52	8.81	+ 2	51	83
7	+ 7	8	20.3	13.24	6.35	+11	1.55	8.80	+ 7	51	83
8	+ 2	10	18.5	13.38	6.33	+ 4	1.56	8.79	+10	51	83
9	− 4	11	17.2	13.51	6.31	− 6	1.56	8.77	+11	51	83
10	−10	+11	15.7	+13.65	+6.29	−16	1.53	+8.76	+ 9	52	83
11	−14	11	14.1	13.79	6.27	−23	1.47	8.74	+ 6	52	83
12	−16	10	12.3	13.93	6.25	−26	1.41	8.73	+ 1	52	83
13	−13	10	10.2	14.06	6.23	−22	1.33	8.71	− 5	52	83
14	− 8	10	8.1	14.20	6.22	−13	1.27	8.69	− 9	52	83
15	0	11	6.1	14.34	6.20	− 1	1.23	8.68	−11	52	83
16	+ 8	+12	4.3	+14.48	+6.19	+13	1.22	+8.66	−11	52	83
17	+14	12	2.6	14.61	6.18	+24	1.23	8.64	− 8	52	83
18	+18	12	0.9	14.75	6.17	+30	1.26	8.62	− 3	52	84
19	+19	12	23.3	14.89	6.16	+30	1.29	8.60	+ 2	52	84
20	+16	12	21.7	15.03	6.15	+25	1.31	8.58	+ 7	52	84
21	+10	12	20.2	15.16	6.14	+16	1.32	8.56	+10	53	84
22	+ 3	+11	18.7	+15.30	+6.13	+ 5	1.31	+8.54	+11	53	84
23	− 3	9	17.1	15.44	6.13	− 6	1.28	8.52	+ 9	53	84
24	− 8	8	15.2	15.58	6.12	−14	1.22	8.50	+ 6	53	84
25	−12	8	13.0	15.72	6.12	−19	1.16	8.48	+ 2	53	84
26	−12	8	10.9	15.85	6.12	−20	1.09	8.46	− 2	53	84
27	−11	9	9.3	15.99	6.12	−17	1.03	8.44	− 6	53	85
28	− 7	+10	7.9	+16.13	+6.12	−12	0.99	+8.42	− 9	53	85
29	− 3	10	6.7	16.27	6.12	− 5	0.95	8.40	−10	53	85
30	+ 2	9	5.5	16.40	6.12	+ 3	0.93	8.38	− 9	54	85
Mai 1	+ 6	8	4.1	16.54	6.13	+10	0.93	8,36	− 7	54	85
2	+ 9	7	2.1	16.68	6.14	+14	0.95	8.34	− 3	54	85
3	+ 9	+ 6	23.4	+16.82	+6.14	+15	0.97	+8.31	+ 1	54	85

Reduktionsgrößen 1933

Tag	0h Welt-Zeit								
	Sternzeit Greenw.	t	f	log g	G	log h	H	log i	i
1933	h	a	s		h m		h m		"
Mai 3	14.7	0.3346	+1.404	1.0921	21 11.0	1.2913	15 1.7	0.7813n	−6.043
4	14.8	0.3373	1.413	1.0931	21 12.0	1.2919	14 57.8	0.7745n	5.950
5	14.8	0.3400	1.422	1.0942	21 13.0	1.2926	14 53.9	0.7675n	5.855
6	14.9	0.3428	1.431	1.0952	21 14.1	1.2932	14 50.1	0.7603n	5.758
7	15.0	0.3455	1.441	1.0963	21 15.1	1.2939	14 46.2	0.7528n	5.660
8	15.0	0.3482	1.450	1.0974	21 16.1	1.2945	14 42.4	0.7451n	5.560
9	15.1	0.3510	+1.459	1.0985	21 17.2	1.2951	14 38.6	0.7371n	−5.459
10	15.2	0.3537	1.469	1.0996	21 18.2	1.2957	14 34.8	0.7288n	5.356
11	15.2	0.3565	1.479	1.1008	21 19.2	1.2963	14 31.0	0.7203n	5.252
12	15.3	0.3592	1.488	1.1020	21 20.3	1.2969	14 27.2	0.7116n	5.147
13	15.4	0.3619	1.498	1.1032	21 21.3	1.2975	14 23.4	0.7023n	5.039
14	15.4	0.3647	1.508	1.1044	21 22.3	1.2981	14 19.6	0.6929n	4.931
15	15.5	0.3674	+1.518	1.1057	21 23.4	1.2987	14 15.9	0.6831n	−4.821
16	15.6	0.3701	1.528	1.1070	21 24.4	1.2993	14 12.1	0.6730n	4.710
17	15.6	0.3729	1.538	1.1083	21 25.4	1.2999	14 8.4	0.6626n	4.598
18	15.7	0.3756	1.548	1.1096	21 26.4	1.3004	14 4.7	0.6517n	4.484
19	15.7	0.3784	1.558	1.1110	21 27.5	1.3010	14 1.0	0.6404n	4.369
20	15.8	0.3811	1.568	1.1123	21 28.5	1.3015	13 57.3	0.6287n	4.253
21	15.9	0.3838	+1.579	1.1137	21 29.5	1.3021	13 53.6	0.6166n	−4.136
22	15.9	0.3866	1.589	1.1152	21 30.5	1.3026	13 49.9	0.6039n	4.017
23	16.0	0.3893	1.600	1.1166	21 31.5	1.3031	13 46.3	0.5908n	3.898
24	16.1	0.3921	1.610	1.1181	21 32.5	1.3036	13 42.6	0.5773n	3.778
25	16.1	0.3948	1.621	1.1195	21 33.4	1.3041	13 39.0	0.5630n	3.656
26	16.2	0.3975	1.632	1.1210	21 34.4	1.3046	13 35.3	0.5481n	3.533
27	16.3	0.4003	+1.642	1.1225	21 35.4	1.3050	13 31.7	0.5328n	−3.410
28	16.3	0.4030	1.653	1.1240	21 36.3	1.3055	13 28.1	0.5167n	3.286
29	16.4	0.4057	1.664	1.1256	21 37.3	1.3059	13 24.5	0.4998n	3.161
30	16.5	0.4085	1.675	1.1271	21 38.2	1.3063	13 20.9	0.4820n	3.034
31	16.5	0.4112	1.686	1.1287	21 39.2	1.3067	13 17.3	0.4634n	2.907
Juni 1	16.6	0.4140	1.697	1.1304	21 40.1	1.3071	13 13.7	0.4440n	2.780
2	16.7	0.4167	+1.708	1.1320	21 41.0	1.3074	13 10.1	0.4234n	−2.651
3	16.7	0.4194	1.719	1.1336	21 41.9	1.3078	13 6.5	0.4017n	2.522
4	16.8	0.4222	1.731	1.1353	21 42.8	1.3081	13 3.0	0.3789n	2.393
5	16.9	0.4249	1.742	1.1370	21 43.7	1.3085	12 59.4	0.3547n	2.263
6	16.9	0.4276	1.753	1.1387	21 44.5	1.3088	12 55.9	0.3286n	2.131
7	17.0	0.4304	1.765	1.1404	21 45.4	1.3090	12 52.3	0.3008n	1.999
8	17.1	0.4331	+1.776	1.1421	21 46.2	1.3093	12 48.8	0.2711n	−1.867
9	17.1	0.4359	1.788	1.1439	21 47.1	1.3096	12 45.2	0.2393n	1.735
10	17.2	0.4386	1.799	1.1457	21 47.9	1.3098	12 41.7	0.2047n	1.602
11	17.3	0.4413	1.810	1.1474	21 48.7	1.3100	12 38.2	0.1667n	1.468
12	17.3	0.4441	1.822	1.1492	21 49.5	1.3102	12 34.7	0.1255n	1.335
13	17.4	0.4468	+1.833	1.1510	21 50.3	1.3104	12 31.1	0.0795n	−1.201

Tag	0h Welt-Zeit										
	f'	g'	G'	Allgemeine Präzession seit 1933.0	$\Delta\psi$	$\Delta\psi'$	Wahre Schiefe	$\Delta\varepsilon$	$\Delta\varepsilon'$	j	k
1933	s in 0.001	" in 0.01	h	"	"	" in 0.01	23°27' "	"	" in 0.01	in 0.001	
Mai 3	+ 9	+ 6	23.4	+16.82	+6.14	+15	0.97	+8.31	+ 1	54	85
4	+ 7	7	20.8	16.95	6.15	+12	0.99	8.29	+ 5	54	85
5	+ 3	9	18.9	17.09	6.16	+ 5	1.00	8.27	+ 9	54	86
6	− 3	11	17.3	17.23	6.18	− 5	1.00	8.25	+11	54	86
7	− 9	12	16.0	17.37	6.19	−15	0.97	8.23	+10	54	86
8	−14	12	14.5	17.50	6.21	−23	0.91	8.20	+ 7	55	86
9	−17	+11	12.9	+17.64	+6.22	−27	0.85	+8.18	+ 3	55	86
10	−16	11	11.0	17.78	6.24	−26	0.77	8.16	− 3	55	86
11	−11	10	8.9	17.92	6.26	−18	0.70	8.14	− 7	55	86
12	− 3	11	6.8	18.05	6.28	− 6	0.65	8.12	−10	55	86
13	+ 5	11	4.9	18.19	6.30	+ 8	0.62	8.10	−11	55	86
14	+13	12	3.1	18.33	6.32	+21	0.62	8.08	− 9	56	87
15	+18	+13	1.4	+18.47	+6.35	+29	0.64	+8.05	− 5	56	87
16	+20	13	23.8	18.61	6.38	+32	0.67	8.03	+ 1	56	87
17	+18	13	22.3	18.74	6.40	+29	0.69	8.01	+ 6	56	87
18	+13	12	20.8	18.88	6.43	+21	0.71	7.99	+ 9	56	87
19	+ 6	11	19.3	19.02	6.46	+10	0.70	7.97	+11	56	87
20	− 1	10	17.8	19.16	6.49	− 1	0.67	7.95	+10	56	87
21	− 6	+ 8	16.0	+19.29	+6.52	−11	0.63	+7.93	+ 7	57	87
22	−10	7	13.8	19.43	6.56	−17	0.57	7.91	+ 3	57	88
23	−12	8	11.5	19.57	6.59	−19	0.50	7.89	− 1	57	88
24	−11	9	9.6	19.71	6.63	−17	0.44	7.88	− 5	57	88
25	− 8	10	8.2	19.84	6.66	−13	0.39	7.86	− 8	57	88
26	− 4	10	6.9	19.98	6.70	− 6	0.36	7.84	−10	58	88
27	+ 1	+10	5.8	+20.12	+6.74	+ 1	0.34	+7.82	−10	58	88
28	+ 5	9	4.4	20.26	6.78	+ 9	0.34	7.80	− 8	58	88
29	+ 8	7	2.7	20.39	6.82	+14	0.35	7.79	− 5	58	88
30	+10	6	0.3	20.53	6.86	+16	0.38	7.77	0	58	88
31	+ 8	7	21.6	20.67	6.91	+13	0.40	7.76	+ 4	59	88
Juni 1	+ 4	8	19.3	20.81	6.95	+ 7	0.43	7.74	+ 8	59	88
2	− 1	+10	17.7	+20.94	+6.99	− 2	0.43	+7.72	+10	59	89
3	− 8	12	16.3	21.08	7.04	−13	0.42	7.71	+10	59	89
4	−14	12	14.8	21.22	7.08	−23	0.38	7.70	+ 8	60	89
5	−17	12	13.3	21.36	7.13	−29	0.33	7.68	+ 4	60	89
6	−18	12	11.6	21.50	7.18	−29	0.26	7.67	− 1	60	89
7	−14	11	9.7	21.63	7.22	−23	0.19	7.66	− 6	60	89
8	− 7	+11	7.7	+21.77	+7.27	−12	0.14	+7.64	−10	61	89
9	+ 1	11	5.8	21.91	7.32	+ 2	0.12	7.63	−11	61	89
10	+ 9	12	3.8	22.05	7.37	+15	0.12	7.62	−10	61	89
11	+16	12	2.0	22.18	7.42	+26	0.15	7.61	− 6	61	89
12	+19	13	0.4	22.32	7.47	+31	0.18	7.60	− 1	61	89
13	+19	+13	22.8	+22.46	+7.53	+31	0.23	+7.59	+ 4	62	89

Reduktionsgrößen 1933

Tag	0h Welt-Zeit								
	Sternzeit Greenw.	t	f	log g	G	log h	H	log i	i
1933	h	s	s		h m		h m		"
Juni 13	17.4	0.4468	+1.833	1.1510	21 50.3	1.3104	12 31.1	0.0795n	−1.201
14	17.5	0.4495	1.845	1.1528	21 51.1	1.3105	12 27.6	0.0278n	1.066
15	17.5	0.4523	1.856	1.1546	21 51.8	1.3107	12 24.1	9.9689n	0.931
16	17.6	0.4550	1.868	1.1565	21 52.6	1.3108	12 20.6	9.9009n	0.796
17	17.7	0.4578	1.880	1.1583	21 53.3	1.3109	12 17.1	9.8202n	0.661
18	17.7	0.4605	1.891	1.1601	21 54.0	1.3110	12 13.6	9.7210n	0.526
19	17.8	0.4632	+1.903	1.1620	21 54.7	1.3110	12 10.1	9.5922n	−0.391
20	17.9	0.4660	1.915	1.1638	21 55.4	1.3111	12 6.6	9.4065n	0.255
21	17.9	0.4687	1.926	1.1657	21 56.1	1.3111	12 3.1	9.0755n	−0.119
22	18.0	0.4715	1.938	1.1676	21 56.8	1.3111	11 59.6	8.2041	+0.016
23	18.0	0.4742	1.950	1.1694	21 57.4	1.3111	11 56.1	9.1818	0.152
24	18.1	0.4769	1.961	1.1713	21 58.0	1.3111	11 52.6	9.4594	0.288
25	18.2	0.4797	+1.973	1.1732	21 58.7	1.3110	11 49.1	9.6263	+0.423
26	18.2	0.4824	1.984	1.1751	21 59.3	1.3110	11 45.6	9.7466	0.558
27	18.3	0.4851	1.996	1.1770	21 59.9	1.3109	11 42.1	9.8407	0.693
28	18.4	0.4879	2.008	1.1788	22 0.5	1.3108	11 38.6	9.9180	0.828
29	18.4	0.4906	2.019	1.1807	22 1.0	1.3106	11 35.1	9.9836	0.963
30	18.5	0.4934	2.031	1.1826	22 1.6	1.3105	11 31.6	0.0406	1.098
Juli 1	18.6	0.4961	+2.042	1.1844	22 2.1	1.3103	11 28.0	0.0906	+1.232
2	18.6	0.4988	2.054	1.1863	22 2.7	1.3102	11 24.5	0.1355	1.366
3	18.7	0.5016	2.065	1.1882	22 3.2	1.3100	11 21.0	0.1758	1.499
4	18.8	0.5043	2.077	1.1901	22 3.7	1.3097	11 17.5	0.2127	1.632
5	18.8	0.5070	2.088	1.1919	22 4.2	1.3095	11 14.0	0.2467	1.765
6	18.9	0.5098	2.099	1.1938	22 4.7	1.3092	11 10.4	0.2781	1.897
7	19.0	0.5125	+2.111	1.1957	22 5.1	1.3090	11 6.9	0.3071	+2.028
8	19.0	0.5153	2.122	1.1975	22 5.6	1.3087	11 3.4	0.3343	2.159
9	19.1	0.5180	2.134	1.1993	22 6.0	1.3084	10 59.8	0.3598	2.290
10	19.2	0.5207	2.145	1.2012	22 6.5	1.3081	10 56.3	0.3836	2.419
11	19.2	0.5235	2.156	1.2030	22 6.9	1.3077	10 52.7	0.4062	2.548
12	19.3	0.5262	2.167	1.2048	22 7.3	1.3074	10 49.2	0.4275	2.676
13	19.4	0.5289	+2.178	1.2066	22 7.7	1.3070	10 45.6	0.4478	+2.804
14	19.4	0.5317	2.189	1.2084	22 8.1	1.3066	10 42.1	0.4670	2.931
15	19.5	0.5344	2.200	1.2102	22 8.4	1.3062	10 38.5	0.4853	3.057
16	19.6	0.5372	2.211	1.2120	22 8.8	1.3058	10 34.9	0.5028	3.183
17	19.6	0.5399	2.222	1.2138	22 9.2	1.3054	10 31.3	0.5194	3.307
18	19.7	0.5426	2.233	1.2156	22 9.5	1.3049	10 27.7	0.5354	3.431
19	19.8	0.5454	+2.243	1.2173	22 9.8	1.3045	10 24.1	0.5507	+3.554
20	19.8	0.5481	2.254	1.2191	22 10.2	1.3040	10 20.5	0.5653	3.675
21	19.9	0.5509	2.265	1.2208	22 10.5	1.3035	10 16.9	0.5792	3.795
22	20.0	0.5536	2.275	1.2225	22 10.8	1.3030	10 13.2	0.5927	3.915
23	20.0	0.5563	2.286	1.2242	22 11.1	1.3025	10 9.6	0.6057	4.034
24	20.1	0.5591	+2.296	1.2259	22 11.4	1.3020	10 5.9	0.6183	+4.152

Tag		0h Welt-Zeit										
		f'	g'	G'	Allgemeine Präzession seit 1933.0	$\Delta\psi$	$\Delta\psi'$	Wahre Schiefe	$\Delta\varepsilon$	$\Delta\varepsilon'$	j	k
1933		s in 0.001	" in 0.01	h	"	"	" in 0.01	23°26′ "	"	" in 0.01	in 0.001	
Juni	13	+19	+13	22.8	+22.46	+7.53	+31	60.23	+7.59	+ 4	62	89
	14	+15	13	21.3	22.60	7.58	+25	60.26	7.58	+ 8	62	89
	15	+ 9	12	19.9	22.73	7.63	+14	60.27	7.57	+10	62	89
	16	+ 2	10	18.5	22.87	7.68	+ 3	60.26	7.57	+10	63	89
	17	− 4	9	16.8	23.01	7.73	− 7	60.23	7.56	+ 8	63	89
	18	− 9	7	14.6	23.15	7.79	−14	60.19	7.55	+ 5	63	89
	19	−11	+ 7	12.2	+23.28	+7.84	−18	60.14	+7.55	0	63	89
	20	−10	8	10.0	23.42	7.89	−17	60.09	7.54	− 4	64	89
	21	− 8	9	8.4	23.56	7.94	−13	60.05	7.54	− 7	64	89
	22	− 4	10	7.1	23.70	8.00	− 7	60.02	7.53	− 9	64	89
	23	0	10	5.9	23.83	8.05	0	60.01	7.53	−10	64	89
	24	+ 5	9	4.7	23.97	8.10	+ 8	60.02	7.53	− 8	65	89
	25	+ 8	+ 8	3.1	+24.11	+8.16	+14	60.04	+7.52	− 6	65	89
	26	+10	7	0.9	24.25	8.21	+17	60.08	7.52	− 2	65	89
	27	+10	7	22.4	24.39	8.26	+16	60.12	7.52	+ 3	65	89
	28	+ 6	8	20.1	24.52	8.31	+11	60.16	7.52	+ 7	66	89
	29	+ 1	10	18.3	24.66	8.36	+ 2	60.19	7.52	+10	66	89
	30	− 6	11	16.7	24.80	8.42	− 9	60.20	7.52	+10	66	89
Juli	1	−12	+12	15.3	+24.93	+8.47	−20	60.18	+7.52	+ 9	67	89
	2	−17	12	13.8	25.07	8.52	−28	60.15	7.52	+ 6	67	89
	3	−18	12	12.2	25.21	8.57	−30	60.10	7.52	+ 1	67	89
	4	−16	12	10.4	25.35	8.62	−27	60.05	7.53	− 5	67	89
	5	−11	11	8.6	25.49	8.67	−18	60.01	7.53	− 9	68	89
	6	− 3	11	6.7	25.62	8.72	− 5	59.99	7.54	−11	68	89
	7	+ 5	+11	4.7	+25.76	+8.76	+ 9	59.99	+7.54	−11	68	89
	8	+13	11	2.8	25.90	8.81	+21	60.03	7.54	− 8	69	89
	9	+18	12	0.9	26.04	8.86	+29	60.08	7.55	− 3	69	89
	10	+18	12	23.3	26.17	8.90	+30	60.14	7.55	+ 2	69	89
	11	+16	12	21.7	26.31	8.95	+26	60.19	7.56	+ 7	70	89
	12	+11	12	20.3	26.45	8.99	+17	60.22	7.57	+10	70	89
	13	+ 4	+11	18.9	+26.59	+9.04	+ 7	60.23	+7.57	+11	70	88
	14	− 2	9	17.4	26.72	9.08	− 4	60.23	7.58	+ 9	70	88
	15	− 7	7	15.4	26.86	9.12	−12	60.20	7.59	+ 6	71	88
	16	−10	7	13.0	27.00	9.16	−16	60.16	7.60	+ 2	71	88
	17	−10	7	10.6	27.14	9.20	−17	60.13	7.61	− 3	71	88
	18	− 9	8	8.7	27.28	9.24	−14	60.10	7.62	− 6	72	88
	19	− 5	+ 9	7.4	+27.41	+9.28	− 8	60.08	+7.63	− 9	72	88
	20	− 1	10	6.1	27.55	9.32	− 1	60.08	7.64	−10	72	88
	21	+ 4	9	4.9	27.69	9.35	+ 7	60.10	7.65	− 9	73	88
	22	+ 8	9	3.5	27.83	9.39	+13	60.13	7.66	− 7	73	88
	23	+10	7	1.6	27.96	9.42	+17	60.18	7.67	− 3	73	88
	24	+11	+ 7	23.2	+28.10	+9.45	+18	60.23	+7.68	+ 1	73	87

Tag		0h Welt-Zeit								
		Sternzeit Greenw.	t	f	log g	G	log h	H	log i	i
1933		h	s	s		h m		h m		"
Juli	24	20.1	0.5591	+2.296	1.2259	22 11.4	1.3020	10 5.9	0.6183	+4.152
	25	20.2	0.5618	2.306	1.2276	22 11.6	1.3015	10 2.3	0.6301	4.267
	26	20.2	0.5645	2.316	1.2292	22 11.9	1.3009	9 58.6	0.6417	4.382
	27	20.3	0.5673	2.327	1.2309	22 12.2	1.3004	9 54.9	0.6528	4.496
	28	20.3	0.5700	2.337	1.2325	22 12.4	1.2998	9 51.2	0.6636	4.609
	29	20.4	0.5728	2.347	1.2341	22 12.7	1.2993	9 47.5	0.6739	4.720
	30	20.5	0.5755	+2.357	1.2357	22 12.9	1.2987	9 43.8	0.6839	+4.830
	31	20.5	0.5782	2.367	1.2373	22 13.1	1.2981	9 40.1	0.6936	4.939
Aug.	1	20.6	0.5810	2.376	1.2389	22 13.3	1.2975	9 36.4	0.7030	5.047
	2	20.7	0.5837	2.386	1.2405	22 13.6	1.2969	9 32.6	0.7121	5.153
	3	20.7	0.5864	2.396	1.2420	22 13.8	1.2963	9 28.9	0.7208	5.258
	4	20.8	0.5892	2.405	1.2436	22 14.0	1.2957	9 25.1	0.7292	5.361
	5	20.9	0.5919	+2.415	1.2451	22 14.2	1.2951	9 21.3	0.7374	+5.462
	6	20.9	0.5947	2.424	1.2466	22 14.4	1.2945	9 17.5	0.7452	5.562
	7	21.0	0.5974	2.433	1.2481	22 14.6	1.2938	9 13.7	0.7529	5.661
	8	21.1	0.6001	2.442	1.2495	22 14.8	1.2932	9 9.9	0.7603	5.759
	9	21.1	0.6029	2.452	1.2510	22 14.9	1.2926	9 6.1	0.7675	5.854
	10	21.2	0.6056	2.461	1.2524	22 15.1	1.2920	9 2.2	0.7744	5.948
	11	21.3	0.6083	+2.470	1.2538	22 15.3	1.2913	8 58.4	0.7811	+6.041
	12	21.3	0.6111	2.478	1.2552	22 15.4	1.2907	8 54.5	0.7875	6.131
	13	21.4	0.6138	2.487	1.2566	22 15.6	1.2901	8 50.7	0.7938	6.220
	14	21.5	0.6166	2.496	1.2580	22 15.8	1.2895	8 46.8	0.7999	6.308
	15	21.5	0.6193	2.504	1.2593	22 15.9	1.2888	8 42.9	0.8057	6.393
	16	21.6	0.6220	2.513	1.2606	22 16.1	1.2882	8 39.0	0.8114	6.477
	17	21.7	0.6248	+2.521	1.2620	22 16.2	1.2876	8 35.0	0.8168	+6.559
	18	21.7	0.6275	2.530	1.2633	22 16.4	1.2870	8 31.1	0.8221	6.639
	19	21.8	0.6303	2.538	1.2645	22 16.5	1.2864	8 27.1	0.8272	6.717
	20	21.9	0.6330	2.546	1.2658	22 16.7	1.2858	8 23.2	0.8321	6.794
	21	21.9	0.6357	2.554	1.2671	22 16.8	1.2852	8 19.2	0.8368	6.868
	22	22.0	0.6385	2.562	1.2683	22 17.0	1.2846	8 15.2	0.8414	6.941
	23	22.1	0.6412	+2.570	1.2695	22 17.1	1.2840	8 11.2	0.8458	+7.012
	24	22.1	0.6439	2.578	1.2707	22 17.3	1.2834	8 7.2	0.8501	7.081
	25	22.2	0.6467	2.586	1.2719	22 17.4	1.2829	8 3.2	0.8542	7.148
	26	22.3	0.6494	2.594	1.2730	22 17.6	1.2823	7 59.1	0.8581	7.212
	27	22.3	0.6522	2.602	1.2742	22 17.7	1.2818	7 55.1	0.8618	7.275
	28	22.4	0.6549	2.609	1.2753	22 17.9	1.2813	7 51.0	0.8654	7.335
	29	22.4	0.6576	+2.617	1.2765	22 18.0	1.2808	7 46.9	0.8689	+7.394
	30	22.5	0.6604	2.624	1.2776	22 18.2	1.2803	7 42.9	0.8722	7.451
	31	22.6	0.6631	2.632	1.2787	22 18.3	1.2798	7 38.8	0.8754	7.505
Sept.	1	22.6	0.6658	2.639	1.2797	22 18.5	1.2793	7 34.7	0.8784	7.558
	2	22.7	0.6686	2.646	1.2808	22 18.6	1.2788	7 30.5	0.8813	7.608
	3	22.8	0.6713	+2.653	1.2818	22 18.8	1.2784	7 26.4	0.8840	+7.656

Tag		f′	g′	G′	Allgemeine Präzession seit 1933.0	Δψ	Δψ′	Wahre Schiefe	Δε	Δε′	j	k
		0h Welt-Zeit										
1933		in 0.001 s	in 0.01 ″	h	″	″	in 0.01 ″	23°27′ ″	″	in 0.01 ″	in 0.001	
Juli	24	+11	+ 7	23.2	+28.10	+9.45	+18	0.23	+7.68	+ 1	73	87
	25	+ 8	8	21.0	28.24	9.48	+14	0.28	7.69	+ 6	74	87
	26	+ 4	9	19.0	28.38	9.51	+ 6	0.33	7.70	+ 9	74	87
	27	− 2	11	17.4	28.51	9.54	− 4	0.36	7.71	+10	74	87
	28	− 9	11	15.9	28.65	9.57	−15	0.36	7.73	+10	74	87
	29	−15	12	14.4	28.79	9.59	−25	0.34	7.74	+ 7	75	87
	30	−18	+12	12.7	+28.93	+9.62	−30	0.31	+7.75	+ 2	75	87
	31	−17	12	11.0	29.06	9.64	−29	0.27	7.77	− 3	75	87
Aug.	1	−13	12	9.3	29.20	9.67	−22	0.23	7.78	− 8	76	87
	2	− 6	11	7.5	29.34	9.69	−10	0.21	7.79	−10	76	86
	3	+ 2	11	5.5	29.48	9.71	+ 3	0.22	7.81	−11	76	86
	4	+10	11	3.6	29.61	9.72	+16	0.26	7.82	− 9	76	86
	5	+15	+11	1.6	+29.75	+9.74	+25	0.31	+7.83	− 4	77	86
	6	+17	11	23.8	29.89	9.76	+28	0.38	7.85	+ 1	77	86
	7	+16	12	22.1	30.03	9.77	+26	0.44	7.86	+ 6	77	86
	8	+11	12	20.6	30.17	9.78	+19	0.49	7.87	+ 9	77	86
	9	+ 5	11	19.2	30.30	9.79	+ 9	0.51	7.89	+11	78	86
	10	− 1	10	17.8	30.44	9.80	− 2	0.52	7.90	+10	78	85
	11	− 6	+ 8	15.9	+30.58	+9.81	−10	0.50	+7.92	+ 7	78	85
	12	−10	7	13.7	30.72	9.82	−16	0.47	7.93	+ 3	78	85
	13	−11	7	11.2	30.85	9.83	−17	0.44	7.94	− 1	79	85
	14	− 9	8	9.2	30.99	9.83	−15	0.41	7.96	− 5	79	85
	15	− 6	9	7.7	31.13	9.83	−10	0.40	7.97	− 8	79	85
	16	− 2	10	6.4	31.27	9.84	− 3	0.39	7.98	−10	79	85
	17	+ 3	+10	5.2	+31.40	+9.84	+ 5	0.41	+8.00	− 9	80	85
	18	+ 7	9	3.9	31.54	9.84	+12	0.44	8.01	− 8	80	84
	19	+10	8	2.2	31.68	9.83	+16	0.49	8.02	− 4	80	84
	20	+11	7	0.1	31.82	9.83	+18	0.54	8.03	0	80	84
	21	+10	8	21.7	31.95	9.83	+16	0.59	8.05	+ 4	81	84
	22	+ 6	9	19.7	32.09	9.82	+10	0.64	8.06	+ 8	81	84
	23	0	+10	18.1	+32.23	+9.81	0	0.67	+8.07	+10	81	84
	24	− 6	11	16.5	32.37	9.80	−10	0.69	8.08	+10	81	84
	25	−12	11	15.0	32.50	9.79	−20	0.67	8.09	+ 8	82	84
	26	−16	11	13.3	32.64	9.78	−27	0.64	8.10	+ 4	82	84
	27	−17	11	11.6	32.78	9.77	−28	0.60	8.12	− 1	82	83
	28	−14	11	9.8	32.92	9.76	−24	0.56	8.13	− 6	82	83
	29	− 8	+11	7.9	+33.05	+9.74	−14	0.53	+8.14	−10	82	83
	30	0	11	6.1	33.19	9.73	− 1	0.53	8.14	−11	83	83
	31	+ 7	11	4.3	33.33	9.71	+12	0.55	8.15	−10	83	83
Sept.	1	+13	11	2.3	33.47	9.69	+22	0.59	8.16	− 6	83	83
	2	+17	11	0.3	33.61	9.67	+27	0.65	8.17	− 1	83	83
	3	+16	+11	22.5	+33.74	+9.65	+27	0.71	+8.18	+ 4	83	83

Reduktionsgrößen 1933

Tag	0h Welt-Zeit								
	Sternzeit Greenw.	t	f	log g	G	log h	H	log i	i
1933	h	s	s		h m		h m		"
Sept. 3	22.8	0.6713	+2.653	1.2818	22 18.8	1.2784	7 26.4	0.8840	+7.656
4	22.8	0.6741	2.661	1.2828	22 18.9	1.2780	7 22.3	0.8866	7.702
5	22.9	0.6768	2.668	1.2838	22 19.1	1.2776	7 18.1	0.8891	7.746
6	23.0	0.6795	2.675	1.2849	22 19.3	1.2772	7 14.0	0.8914	7.788
7	23.0	0.6823	2.682	1.2859	22 19.4	1.2768	7 9.8	0.8936	7.827
8	23.1	0.6850	2.689	1.2868	22 19.6	1.2764	7 5.6	0.8956	7.864
9	23.2	0.6877	+2.696	1.2878	22 19.8	1.2761	7 1.4	0.8975	+7.898
10	23.2	0.6905	2.703	1.2887	22 20.0	1.2758	6 57.2	0.8993	7.931
11	23.3	0.6932	2.709	1.2897	22 20.2	1.2755	6 53.0	0.9010	7.962
12	23.4	0.6960	2.716	1.2906	22 20.3	1.2752	6 48.8	0.9025	7.990
13	23.4	0.6987	2.723	1.2915	22 20.5	1.2750	6 44.6	0.9040	8.016
14	23.5	0.7014	2.730	1.2924	22 20.7	1.2747	6 40.4	0.9052	8.039
15	23.6	0.7042	+2.736	1.2933	22 20.9	1.2745	6 36.2	0.9063	+8.060
16	23.6	0.7069	2.743	1.2942	22 21.1	1.2743	6 31.9	0.9074	8.079
17	23.7	0.7096	2.750	1.2950	22 21.3	1.2742	6 27.7	0.9083	8.096
18	23.8	0.7124	2.756	1.2959	22 21.5	1.2740	6 23.4	0.9090	8.109
19	23.8	0.7151	2.763	1.2967	22 21.8	1.2739	6 19.2	0.9096	8.121
20	23.9	0.7179	2.770	1.2976	22 22.0	1.2738	6 14.9	0.9101	8.131
21	0.0	0.7206	+2.776	1.2984	22 22.2	1.2738	6 10.7	0.9105	+8.138
22	0.0	0.7233	2.783	1.2992	22 22.5	1.2737	6 6.4	0.9108	8.143
23	0.1	0.7261	2.789	1.3001	22 22.7	1.2737	6 2.1	0.9109	8.145
24	0.2	0.7288	2.796	1.3009	22 23.0	1.2737	5 57.9	0.9109	8.146
25	0.2	0.7316	2.802	1.3017	22 23.2	1.2737	5 53.6	0.9108	8.143
26	0.3	0.7343	2.809	1.3025	22 23.5	1.2738	5 49.3	0.9105	8.138
27	0.4	0.7370	+2.816	1.3032	22 23.7	1.2738	5 45.0	0.9101	+8.130
28	0.4	0.7398	2.822	1.3040	22 24.0	1.2739	5 40.8	0.9096	8.121
29	0.5	0.7425	2.829	1.3048	22 24.3	1.2740	5 36.5	0.9090	8.109
30	0.6	0.7452	2.835	1.3056	22 24.6	1.2742	5 32.2	0.9082	8.095
Okt. 1	0.6	0.7480	2.842	1.3064	22 24.8	1.2744	5 27.9	0.9073	8.078
2	0.7	0.7507	2.849	1.3071	22 25.1	1.2745	5 23.7	0.9063	8.059
3	0.7	0.7535	+2.855	1.3079	22 25.4	1.2748	5 19.4	0.9051	+8.038
4	0.8	0.7562	2.862	1.3087	22 25.8	1.2750	5 15.1	0.9038	8.014
5	0.9	0.7589	2.869	1.3094	22 26.1	1.2752	5 10.8	0.9024	7.988
6	0.9	0.7617	2.876	1.3102	22 26.4	1.2755	5 6.6	0.9009	7.959
7	1.0	0.7644	2.882	1.3109	22 26.7	1.2758	5 2.3	0.8992	7.928
8	1.1	0.7671	2.889	1.3117	22 27.1	1.2762	4 58.1	0.8973	7.894
9	1.1	0.7699	+2.896	1.3125	22 27.4	1.2765	4 53.8	0.8954	+7.859
10	1.2	0.7726	2.903	1.3132	22 27.7	1.2769	4 49.6	0.8932	7.820
11	1.3	0.7754	2.910	1.3140	22 28.1	1.2772	4 45.3	0.8910	7.780
12	1.3	0.7781	2.917	1.3148	22 28.4	1.2776	4 41.1	0.8886	7.737
13	1.4	0.7808	2.924	1.3155	22 28.8	1.2781	4 36.8	0.8860	7.692
14	1.5	0.7836	+2.931	1.3163	22 29.2	1.2785	4 32.6	0.8833	+7.644

Tag	0ʰ Welt-Zeit										
	f'	g'	G'	Allgemeine Präzession seit 1933.0	$\Delta\psi$	$\Delta\psi'$	Wahre Schiefe	$\Delta\varepsilon$	$\Delta\varepsilon'$	j	k
1933	s in 0.001	" in 0.01	h	"	"	" in 0.01	23°27' "	"	" in 0.01	in 0.001	
Sept. 3	+16	+11	22.5	+33.74	+9.65	+27	0.71	+8.18	+ 4	83	83
4	+13	12	20.9	33.88	9.63	+21	0.76	8.19	+ 8	84	83
5	+ 7	11	19.5	34.02	9.61	+11	0.78	8.19	+10	84	83
6	0	10	18.0	34.16	9.59	0	0.79	8.20	+10	84	83
7	− 6	9	16.4	34.29	9.57	− 9	0.77	8.20	+ 8	84	82
8	− 9	8	14.3	34.43	9.54	−15	0.73	8.21	+ 4	84	82
9	−11	+ 7	12.1	+34.57	+9.52	−18	0.69	+8.21	0	85	82
10	−10	8	9.8	34.71	9.49	−17	0.65	8.22	− 4	85	82
11	− 7	9	8.1	34.84	9.47	−12	0.62	8.22	− 8	85	82
12	− 3	10	6.8	34.98	9.44	− 5	0.61	8.22	− 9	85	82
13	+ 1	10	5.6	35.12	9.41	+ 2	0.60	8.23	−10	85	82
14	+ 6	9	4.4	35.26	9.39	+10	0.62	8.23	− 8	86	82
15	+ 9	+ 8	2.8	+35.39	+9.36	+15	0.65	+8.23	− 5	86	82
16	+11	7	0.7	35.53	9.33	+18	0.69	8.23	− 1	86	82
17	+10	7	22.4	35.67	9.30	+17	0.73	8.23	+ 3	86	82
18	+ 7	8	20.2	35.81	9.27	+12	0.77	8.23	+ 7	86	82
19	+ 2	10	18.5	35.94	9.24	+ 3	0.79	8.23	+ 9	86	82
20	− 4	11	17.0	36.08	9.21	− 7	0.80	8.23	+10	87	82
21	−10	+11	15.5	+36.22	+9.18	−17	0.78	+8.23	+ 9	87	82
22	−15	11	13.9	36.36	9.15	−24	0.74	8.22	+ 5	87	82
23	−16	11	12.1	36.50	9.12	−27	0.68	8.22	0	87	82
24	−15	11	10.3	36.63	9.09	−24	0.63	8.21	− 5	87	82
25	−10	11	8.4	36.77	9.06	−16	0.58	8.21	− 9	87	82
26	− 2	11	6.5	36.91	9.03	− 4	0.55	8.20	−11	88	82
27	+ 6	+11	4.7	+37.05	+9.00	+ 9	0.55	+8.20	−10	88	82
28	+12	11	2.9	37.18	8.97	+20	0.57	8.19	− 7	88	82
29	+16	11	0.9	37.32	8.94	+27	0.61	8.18	− 3	88	82
30	+17	11	23.1	37.46	8.91	+28	0.65	8.18	+ 3	88	82
Okt. 1	+14	12	21.4	37.60	8.88	+23	0.69	8.17	+ 7	88	82
2	+ 9	12	19.9	37.73	8.85	+14	0.71	8.16	+10	88	82
3	+ 2	+11	18.5	+37.87	+8.82	+ 3	0.70	+8.15	+11	89	82
4	− 4	10	16.9	38.01	8.80	− 7	0.67	8.14	+ 9	89	82
5	− 9	8	15.0	38.15	8.77	−15	0.63	8.12	+ 6	89	82
6	−11	7	12.7	38.28	8.74	−18	0.57	8.11	+ 1	89	82
7	−11	8	10.4	38.42	8.72	−18	0.51	8.10	− 3	89	82
8	− 8	9	8.6	38.56	8.69	−14	0.46	8.09	− 7	89	82
9	− 5	+10	7.3	+38.70	+8.67	− 8	0.42	+8.07	− 9	90	82
10	0	10	6.0	38.83	8.64	0	0.40	8.06	−10	90	82
11	+ 4	9	4.8	38.97	8.62	+ 7	0.39	8.04	− 9	90	83
12	+ 8	8	3.3	39.11	8.60	+13	0.40	8.03	− 6	90	83
13	+10	7	1.4	39.25	8.57	+17	0.42	8.01	− 3	90	83
14	+10	+ 7	23.0	+39.39	+8.55	+16	0.45	+8.00	+ 2	90	83

Tag	0h Welt-Zeit								
	Sternzeit Greenw.	t	f	log g	G	log h	H	log i	i
1933	h	s	s		h m		h m		"
Okt. 14	1.5	0.7836	+2.931	1.3163	22 29.2	1.2785	4 32.6	0.8833	+7.644
15	1.5	0.7863	2.939	1.3171	22 29.6	1.2790	4 28.4	0.8805	7.595
16	1.6	0.7890	2.946	1.3178	22 29.9	1.2794	4 24.2	0.8775	7.543
17	1.7	0.7918	2.953	1.3186	22 30.3	1.2799	4 19.9	0.8744	7.488
18	1.7	0.7945	2.961	1.3194	22 30.7	1.2804	4 15.7	0.8711	7.432
19	1.8	0.7973	2.968	1.3202	22 31.1	1.2809	4 11.6	0.8676	7.373
20	1.9	0.8000	+2.976	1.3210	22 31.5	1.2815	4 7.4	0.8640	+7.312
21	1.9	0.8027	2.983	1.3218	22 31.9	1.2820	4 3.2	0.8602	7.248
22	2.0	0.8055	2.991	1.3226	22 32.3	1.2826	3 59.0	0.8563	7.183
23	2.1	0.8082	2.999	1.3234	22 32.7	1.2832	3 54.9	0.8522	7.115
24	2.1	0.8110	3.007	1.3242	22 33.2	1.2837	3 50.7	0.8479	7.045
25	2.2	0.8137	3.015	1.3251	22 33.6	1.2843	3 46.6	0.8434	6.973
26	2.3	0.8164	+3.023	1.3259	22 34.0	1.2849	3 42.4	0.8387	+6.898
27	2.3	0.8192	3.031	1.3267	22 34.5	1.2856	3 38.3	0.8338	6.821
28	2.4	0.8219	3.039	1.3276	22 34.9	1.2862	3 34.2	0.8288	6.742
29	2.5	0.8246	3.047	1.3285	22 35.3	1.2868	3 30.1	0.8236	6.662
30	2.5	0.8274	3.055	1.3293	22 35.8	1.2874	3 26.0	0.8182	6.580
31	2.6	0.8301	3.064	1.3302	22 36.2	1.2881	3 21.9	0.8126	6.495
Nov. 1	2.7	0.8329	+3.073	1.3311	22 36.6	1.2887	3 17.8	0.8067	+6.408
2	2.7	0.8356	3.081	1.3320	22 37.1	1.2894	3 13.8	0.8006	6.319
3	2.8	0.8383	3.090	1.3329	22 37.5	1.2900	3 9.7	0.7943	6.228
4	2.9	0.8411	3.099	1.3338	22 38.0	1.2907	3 5.7	0.7878	6.135
5	2.9	0.8438	3.108	1.3347	22 38.5	1.2913	3 1.6	0.7810	6.040
6	3.0	0.8465	3.117	1.3357	22 38.9	1.2920	2 57.6	0.7741	5.944
7	3.0	0.8493	+3.126	1.3366	22 39.4	1.2927	2 53.6	0.7669	+5.846
8	3.1	0.8520	3.135	1.3376	22 39.8	1.2933	2 49.6	0.7593	5.745
9	3.2	0.8548	3.144	1.3386	22 40.3	1.2940	2 45.6	0.7515	5.643
10	3.2	0.8575	3.154	1.3395	22 40.7	1.2946	2 41.6	0.7434	5.539
11	3.3	0.8602	3.163	1.3405	22 41.2	1.2953	2 37.6	0.7350	5.433
12	3.4	0.8630	3.173	1.3416	22 41.7	1.2959	2 33.6	0.7264	5.326
13	3.4	0.8657	+3.183	1.3426	22 42.1	1.2965	2 29.7	0.7174	+5.217
14	3.5	0.8684	3.192	1.3436	22 42.6	1.2972	2 25.7	0.7081	5.106
15	3.6	0.8712	3.202	1.3447	22 43.0	1.2978	2 21.8	0.6984	4.994
16	3.6	0.8739	3.212	1.3457	22 43.5	1.2984	2 17.9	0.6884	4.880
17	3.7	0.8767	3.222	1.3468	22 43.9	1.2990	2 14.0	0.6780	4.764
18	3.8	0.8794	3.233	1.3479	22 44.4	1.2996	2 10.0	0.6672	4.647
19	3.8	0.8821	+3.243	1.3490	22 44.8	1.3002	2 6.2	0.6560	+4.529
20	3.9	0.8849	3.253	1.3501	22 45.3	1.3008	2 2.3	0.6443	4.409
21	4.0	0.8876	3.264	1.3512	22 45.7	1.3014	1 58.4	0.6322	4.287
22	4.0	0.8904	3.274	1.3523	22 46.1	1.3019	1 54.5	0.6196	4.165
23	4.1	0.8931	3.285	1.3535	22 46.6	1.3025	1 50.6	0.6065	4.041
24	4.2	0.8958	+3.296	1.3546	22 47.0	1.3030	1 46.8	0.5927	+3.915

Tag	0h Welt-Zeit										
	f'	g'	G'	Allgemeine Präzession seit 1933.0	$\Delta\psi$	$\Delta\psi'$	Wahre Schiefe	$\Delta\varepsilon$	$\Delta\varepsilon'$	j	k
1933	s in 0.001	" in 0.01	h	"	"	" in 0.01	23°26' "	"	" in 0.01	in 0.001	
Okt. 14	+10	+ 7	23.0	+39.39	+8.55	+16	60.45	+8.00	+ 2	90	83
15	+ 8	8	20.7	39.52	8.53	+12	60.47	7.98	+ 6	91	83
16	+ 3	9	18.8	39.66	8.51	+ 5	60.48	7.96	+ 9	91	83
17	− 3	10	17.3	39.80	8.50	− 5	60.48	7.94	+10	91	83
18	− 9	11	15.9	39.94	8.48	−15	60.45	7.92	+ 9	91	83
19	−14	11	14.4	40.07	8.47	−23	60.40	7.91	+ 7	91	83
20	−17	+11	12.8	+40.21	+8.45	−27	60.33	+7.89	+ 2	91	83
21	−16	11	10.9	40.35	8.44	−26	60.26	7.87	− 3	91	83
22	−11	11	9.0	40.49	8.43	−19	60.19	7.85	− 7	92	84
23	− 4	11	7.0	40.62	8.42	− 7	60.14	7.83	−10	92	84
24	+ 4	11	5.1	40.76	8.41	+ 6	60.12	7.80	−11	92	84
25	+11	11	3.3	40.90	8.40	+18	60.12	7.78	− 9	92	84
26	+16	+11	1.5	+41.04	+8.39	+27	60.14	+7.76	− 4	92	84
27	+18	12	23.7	41.17	8.39	+30	60.17	7.74	+ 1	93	84
28	+16	12	22.0	41.31	8.38	+26	60.19	7.72	+ 6	93	84
29	+11	12	20.5	41.45	8.38	+18	60.20	7.69	+ 9	93	84
30	+ 4	11	19.0	41.59	8.38	+ 7	60.19	7.67	+11	93	85
31	− 2	10	17.5	41.72	8.38	− 4	60.16	7.65	+10	93	85
Nov. 1	− 7	+ 8	15.6	+41.86	+8.38	−12	60.10	+7.62	+ 7	93	85
2	−11	7	13.4	42.00	8.39	−17	60.04	7.60	+ 3	94	85
3	−11	7	11.0	42.14	8.39	−18	59.97	7.58	− 2	94	85
4	− 9	8	9.1	42.28	8.40	−15	59.90	7.55	− 6	94	85
5	− 6	9	7.6	42.41	8.41	−10	59.85	7.53	− 9	94	85
6	− 1	10	6.4	42.55	8.42	− 2	59.81	7.50	−10	94	85
7	+ 3	+10	5.2	+42.69	+8.43	+ 5	59.79	+7.48	− 9	95	86
8	+ 7	8	3.8	42.83	8.44	+12	59.79	7.46	− 7	95	86
9	+ 9	7	2.1	42.96	8.46	+15	59.79	7.43	− 4	95	86
10	+10	6	23.8	43.10	8.48	+16	59.81	7.41	0	95	86
11	+ 8	7	21.3	43.24	8.49	+13	59.83	7.38	+ 5	96	86
12	+ 4	8	19.2	43.38	8.51	+ 7	59.84	7.36	+ 8	96	86
13	− 2	+10	17.6	+43.51	+8.54	− 3	59.83	+7.34	+10	96	86
14	− 8	11	16.2	43.65	8.56	−13	59.81	7.31	+10	96	86
15	−13	12	14.8	43.79	8.58	−22	59.76	7.29	+ 8	96	87
16	−17	12	13.3	43.93	8.61	−28	59.70	7.27	+ 4	97	87
17	−17	11	11.6	44.06	8.64	−28	59.62	7.24	− 1	97	87
18	−14	11	9.7	44.20	8.67	−23	59.55	7.22	− 6	97	87
19	− 7	+11	7.8	+44.34	+8.70	−12	59.49	+7.20	−10	97	87
20	+ 1	11	5.8	44.48	8.73	+ 1	59.45	7.17	−11	98	87
21	+ 9	11	3.9	44.61	8.76	+15	59.44	7.15	−10	98	87
22	+15	12	2.1	44.75	8.80	+25	59.45	7.13	− 6	98	87
23	+18	12	0.3	44.89	8.83	+30	59.48	7.11	− 1	98	88
24	+18	+12	22.7	+45.03	+8.87	+29	59.51	+7.09	+ 4	99	88

Tag	0h Welt-Zeit								
	Sternzeit Greenw.	t	f	log g	G	log h	H	log i	i
1933	h	a	s		h m		h m		"
Nov. 24	4.2	0.8958	+3.296	1.3546	22 47.0	1.3030	1 46.8	0.5927	+3.915
25	4.2	0.8986	3.306	1.3558	22 47.4	1.3036	1 42.9	0.5784	3.788
26	4.3	0.9013	3.317	1.3569	22 47.9	1.3041	1 39.1	0.5635	3.660
27	4.4	0.9040	3.328	1.3581	22 48.3	1.3046	1 35.3	0.5480	3.532
28	4.4	0.9068	3.339	1.3593	22 48.7	1.3050	1 31.4	0.5316	3.401
29	4.5	0.9095	3.351	1.3605	22 49.1	1.3055	1 27.6	0.5144	3.269
30	4.6	0.9123	+3.362	1.3617	22 49.5	1.3060	1 23.8	0.4965	+3.137
Dez. 1	4.6	0.9150	3.373	1.3629	22 49.9	1.3064	1 20.0	0.4777	3.004
2	4.7	0.9177	3.384	1.3641	22 50.3	1.3068	1 16.2	0.4579	2.870
3	4.8	0.9205	3.396	1.3653	22 50.7	1.3072	1 12.4	0.4368	2.734
4	4.8	0.9232	3.407	1.3666	22 51.1	1.3076	1 8.6	0.4145	2.597
5	4.9	0.9259	3.419	1.3678	22 51.4	1.3080	1 4.8	0.3909	2.460
6	5.0	0.9287	+3.430	1.3691	22 51.8	1.3083	1 1.1	0.3659	+2.322
7	5.0	0.9314	3.442	1.3703	22 52.2	1.3086	0 57.3	0.3393	2.184
8	5.1	0.9342	3.454	1.3716	22 52.5	1.3089	0 53.5	0.3105	2.044
9	5.2	0.9369	3.465	1.3729	22 52.9	1.3092	0 49.8	0.2797	1.904
10	5.2	0.9396	3.477	1.3742	22 53.2	1.3095	0 46.0	0.2465	1.764
11	5.3	0.9424	3.489	1.3755	22 53.5	1.3098	0 42.2	0.2101	1.622
12	5.3	0.9451	+3.501	1.3767	22 53.9	1.3100	0 38.5	0.1703	+1.480
13	5.4	0.9478	3.513	1.3780	22 54.2	1.3102	0 34.7	0.1261	1.337
14	5.5	0.9506	3.525	1.3793	22 54.5	1.3104	0 31.0	0.0770	1.194
15	5.5	0.9533	3.537	1.3806	22 54.8	1.3105	0 27.2	0.0216	1.051
16	5.6	0.9561	3.549	1.3820	22 55.1	1.3107	0 23.5	9.9581	0.908
17	5.7	0.9588	3.561	1.3833	22 55.4	1.3108	0 19.8	9.8831	0.764
18	5.7	0.9615	+3.573	1.3846	22 55.7	1.3109	0 16.0	9.7924	+0.620
19	5.8	0.9643	3.585	1.3859	22 56.0	1.3110	0 12.3	9.6776	0.476
20	5.9	0.9670	3.597	1.3872	22 56.2	1.3111	0 8.5	9.5198	0.331
21	5.9	0.9698	3.609	1.3885	22 56.5	1.3111	0 4.8	9.2695	0.186
22	6.0	0.9725	3.621	1.3898	22 56.8	1.3111	0 1.1	8.6128	+0.041
23	6.1	0.9752	3.633	1.3911	22 57.0	1.3111	23 57.3	9.0128*n*	−0.103
24	6.1	0.9780	+3.645	1.3925	22 57.2	1.3111	23 53.6	9.3945*n*	−0.248
25	6.2	0.9807	3.657	1.3938	22 57.5	1.3110	23 49.8	9.5944*n*	0.393
26	6.3	0.9834	3.669	1.3951	22 57.7	1.3110	23 46.1	9.7308*n*	0.538
27	6.3	0.9862	3.682	1.3964	22 57.9	1.3109	23 42.4	9.8338*n*	0.682
28	6.4	0.9889	3.694	1.3977	22 58.1	1.3108	23 38.6	9.9170*n*	0.826
29	6.5	0.9917	3.706	1.3990	22 58.3	1.3106	23 34.9	9.9868*n*	0.970
30	6.5	0.9944	+3.718	1.4003	22 58.5	1.3105	23 31.1	0.0469*n*	−1.114
31	6.6	0.9971	3.730	1.4016	22 58.7	1.3103	23 27.4	0.0997*n*	1.258
32	6.7	0.9999	+3.742	1.4029	22 58.9	1.3101	23 23.6	0.1464*n*	−1.401

Tag	0ʰ Welt-Zeit										
	f'	g'	G'	Allgemeine Präzession seit 1933.0	$\Delta\psi$	$\Delta\psi'$	Wahre Schiefe	$\Delta\varepsilon$	$\Delta\varepsilon'$	j	k
1933	s in 0.001	" in 0.01	h	"	"	" in 0.01	23°26' "	"	" in 0.01	in 0.001	
Nov. 24	+18	+12	22.7	+45.03	+ 8.87	+29	59.51	+7.09	+ 4	99	88
25	+14	12	21.1	45.17	8.91	+23	59.53	7.06	+ 8	99	88
26	+ 8	12	19.7	45.30	8.95	+13	59.53	7.04	+11	99	88
27	+ 1	10	18.2	45.44	8.99	+ 1	59.50	7.02	+10	100	88
28	− 5	9	16.4	45.58	9.04	− 9	59.46	7.00	+ 8	100	88
29	− 9	7	14.2	45.72	9.08	−15	59.40	6.98	+ 4	100	88
30	−11	+ 7	11.7	+45.85	+ 9.13	−18	59.33	+6.96	0	100	88
Dez. 1	−10	8	9.5	45.99	9.17	−16	59.27	6.94	− 5	101	88
2	− 7	9	7.9	46.13	9.22	−11	59.22	6.93	− 8	101	88
3	− 2	10	6.6	46.27	9.27	− 4	59.18	6.91	−10	101	88
4	+ 2	10	5.4	46.40	9.32	+ 4	59.17	6.89	−10	101	89
5	+ 6	9	4.1	46.54	9.37	+10	59.17	6.88	− 8	102	89
6	+ 9	+ 8	2.5	+46.68	+ 9.42	+15	59.18	+6.86	− 5	102	89
7	+10	7	0.4	46.82	9.48	+17	59.20	6.84	− 1	102	89
8	+ 9	7	22.0	46.95	9.53	+15	59.23	6.83	+ 3	103	89
9	+ 5	8	19.7	47.09	9.58	+ 9	59.25	6.81	+ 7	103	89
10	0	10	18.0	47.23	9.64	0	59.26	6.80	+10	103	89
11	− 6	11	16.5	47.37	9.70	−11	59.25	6.79	+10	104	89
12	−13	+12	15.1	+47.50	+ 9.75	−21	59.22	+6.78	+ 9	104	89
13	−17	12	13.7	47.64	9.81	−28	59.17	6.76	+ 5	104	89
14	−19	12	12.1	47.78	9.87	−30	59.11	6.75	0	104	89
15	−16	12	10.4	47.92	9.93	−27	59.05	6.74	− 5	105	89
16	−11	11	8.6	48.06	9.98	−18	59.00	6.73	− 9	105	89
17	− 3	11	6.7	48.19	10.04	− 5	58.97	6.72	−11	105	89
18	+ 5	+11	4.8	+48.33	+10.10	+ 9	58.96	+6.71	−10	106	89
19	+13	11	2.8	48.47	10.16	+21	58.98	6.71	− 7	106	89
20	+17	12	0.9	48.61	10.22	+29	59.02	6.70	− 3	106	89
21	+18	12	23.1	48.74	10.28	+30	59.07	6.69	+ 3	107	89
22	+16	13	21.6	48.88	10.34	+26	59.10	6.69	+ 7	107	89
23	+10	12	20.2	49.02	10.40	+17	59.13	6.68	+10	107	89
24	+ 3	+11	18.8	+49.16	+10.46	+ 6	59.13	+6.68	+11	108	89
25	− 3	9	17.2	49.29	10.52	− 5	59.10	6.67	+ 9	108	89
26	− 8	7	15.1	49.43	10.58	−13	59.06	6.67	+ 5	108	89
27	−10	6	12.5	49.57	10.64	−16	59.02	6.67	+ 1	109	89
28	− 9	7	10.0	49.71	10.70	−16	58.97	6.67	− 4	109	89
29	− 7	9	8.2	49.84	10.76	−12	58.93	6.67	− 7	109	89
30	− 3	+ 9	6.8	+49.98	+10.82	− 5	58.91	+6.67	− 9	110	89
31	+ 2	10	5.6	50.12	10.88	+ 3	58.90	6.67	−10	110	89
32	+ 6	+ 9	4.4	+50.26	+10.94	+10	58.91	+6.67	− 9	110	89

Reduktionsgrößen 1933

für 12ʰ Sternzeit Greenwich

Welt-Zeit	t	A		A'	B		B'	C		D	
1933	s			in 0.00001	"		in 0.001	"		"	
Jan. 0.224	−0.0016	+0.11564	392	+581	−8.106	4	−47	−3.052	329	+20.196	62
1.221	+0.0011	0.11956	391	+446	8.110	4	−85	3.381	327	20.134	69
2.218	0.0039	0.12347	389	+244	8.114	5	−105	3.708	326	20.065	75
3.216	0.0066	0.12736	388	+27	8.119	6	−103	4.034	325	19.990	81
4.213	0.0093	0.13124	386	−169	8.125	7	−81	4.359	323	19.909	88
5.210	0.0121	0.13510	385	−313	8.132	7	−47	4.682	322	19.821	93
6.207	0.0148	+0.13895	383	−387	−8.139	8	−6	−5.004	321	+19.728	100
7.205	0.0175	0.14278	381	−384	8.147	8	+36	5.325	318	19.628	105
8.202	0.0202	0.14659	379	−313	8.155	9	+71	5.643	317	19.523	113
9.199	0.0230	0.15038	378	−185	8.164	9	+94	5.960	314	19.410	118
10.196	0.0257	0.15416	376	−25	8.173	10	+100	6.274	313	19.292	124
11.194	0.0284	0.15792	374	+139	8.183	10	+89	6.587	312	19.168	131
12.191	0.0312	+0.16166	371	+275	−8.193	11	+59	−6.899	308	+19.037	136
13.188	0.0339	0.16537	369	+350	8.204	11	+17	7.207	306	18.901	142
14.186	0.0366	0.16906	366	+341	8.215	11	−30	7.513	304	18.759	147
15.183	0.0394	0.17272	364	+239	8.226	12	−73	7.817	301	18.612	155
16.180	0.0421	0.17636	362	+61	8.238	13	−101	8.118	299	18.457	160
17.177	0.0448	0.17998	359	−159	8.251	13	−107	8.417	296	18.297	165
18.175	0.0476	+0.18357	357	−369	−8.264	14	−90	−8.713	294	+18.132	171
19.172	0.0503	0.18714	353	−517	8.278	14	−50	9.007	290	17.961	178
20.169	0.0530	0.19067	351	−558	8.292	14	+2	9.297	288	17.783	182
21.166	0.0557	0.19418	348	−478	8.306	15	+55	9.585	284	17.601	188
22.164	0.0585	0.19766	346	−289	8.321	15	+95	9.869	282	17.413	193
23.161	0.0612	0.20112	343	−32	8.336	15	+113	10.151	277	17.220	198
24.158	0.0639	+0.20455	339	+235	−8.351	15	+104	−10.428	275	+17.022	204
25.155	0.0667	0.20794	336	+452	8.366	15	+71	10.703	271	16.818	209
26.153	0.0694	0.21130	334	+571	8.381	16	+24	10.974	268	16.609	214
27.150	0.0721	0.21464	330	+579	8.397	16	−28	11.242	265	16.395	218
28.147	0.0749	0.21794	327	+480	8.413	16	−73	11.507	260	16.177	225
29.145	0.0776	0.22121	324	+305	8.429	16	−100	11.767	257	15.952	230
30.142	0.0803	+0.22445	320	+92	−8.445	17	−106	−12.024	253	+15.722	234
31.139	0.0830	0.22765	317	−112	8.462	16	−91	12.277	249	15.488	239
Febr. 1.136	0.0858	0.23082	315	−273	8.478	17	−60	12.526	245	15.249	244
2.134	0.0885	0.23397	312	−372	8.495	17	−20	12.771	241	15.005	247
3.131	0.0912	0.23709	308	−395	8.512	17	+22	13.012	237	14.758	252
4.128	0.0940	0.24017	305	−346	8.529	17	+61	13.249	233	14.506	258
5.126	0.0967	+0.24322	301	−236	−8.546	16	+87	−13.482	229	+14.248	261
6.123	0.0994	0.24623	298	−88	8.562	16	+100	13.711	224	13.987	266
7.120	0.1022	0.24921	295	+79	8.578	16	+95	13.935	219	13.721	270
8.117	0.1049	0.25216	292	+229	8.594	16	+71	14.154	215	13.451	274
9.115	0.1076	0.25508	290	+332	8.610	16	+35	14.369	211	13.177	278
10.112	0.1104	+0.25798		+361	−8.626		−11	−14.580		+12.899	

Reduktionsgrößen 1933

für 12ʰ Sternzeit Greenwich

Welt-Zeit	t	A	Δ	A′	B	Δ	B′	C	Δ	D	Δ
1933	a			in 0.00001	″		in 0.″001	″		″	
Febr. 10.112	0.1104	+0.25798		+361	−8.626		− 11	−14.580		+12.899	
11.109	0.1131	0.26084	286	+300	8.642	16	− 58	14.786	206	12.616	283
12.106	0.1158	0.26367	283	+155	8.658	16	− 93	14.987	201	12.331	285
13.104	0.1185	0.26647	280	− 46	8.674	16	−108	15.184	197	12.043	288
14.101	0.1213	0.26923	276	−263	8.689	15	−101	15.376	192	11.751	292
15.098	0.1240	0.27196	273	−437	8.704	15	− 70	15.563	187	11.454	297
16.096	0.1267	+0.27467	271	−525	−8.719	15	− 21	−15.745	182	+11.153	301
17.093	0.1295	0.27734	267	−497	8.734	15	+ 33	15.923	178	10.850	303
18.090	0.1322	0.27999	265	−353	8.748	14	+ 80	16.095	172	10.543	307
19.087	0.1349	0.28261	262	−124	8.762	14	+108	16.262	167	10.234	309
20.085	0.1377	0.28521	260	+139	8.776	14	+110	16.425	163	9.922	312
21.082	0.1404	0.28778	257	+371	8.789	13	+ 86	16.582	157	9.606	316
22.079	0.1431	+0.29032	254	+527	−8.802	13	+ 44	−16.734	152	+ 9.287	319
23.076	0.1458	0.29284	252	+577	8.814	12	− 8	16.880	146	8.966	321
24.074	0.1486	0.29533	249	+514	8.826	12	− 56	17.022	142	8.643	323
25.071	0.1513	0.29780	247	+361	8.838	12	− 91	17.158	136	8.317	326
26.068	0.1540	0.30024	244	+157	8.849	11	−106	17.289	131	7.988	329
27.065	0.1568	0.30266	242	− 54	8.859	10	− 99	17.414	125	7.657	331
28.063	0.1595	+0.30505	239	−234	−8.869	10	− 73	−17.535	121	+ 7.325	332
März 1.060	0.1622	0.30743	238	−355	8.879	10	− 37	17.650	115	6.990	335
2.057	0.1650	0.30979	236	−405	8.888	9	+ 6	17.759	109	6.653	337
3.055	0.1677	0.31213	234	−378	8.897	9	+ 48	17.862	103	6.314	339
4.052	0.1704	0.31445	232	−289	8.905	8	+ 79	17.961	99	5.974	340
5.049	0.1732	0.31675	230	−154	8.912	7	+ 98	18.054	93	5.631	343
6.046	0.1759	+0.31903	228	+ 8	−8.919	7	+ 99	−18.141	87	+ 5.287	344
7.044	0.1786	0.32130	227	+164	8.925	6	+ 83	18.222	81	4.943	344
8.041	0.1813	0.32355	225	+285	8.931	6	+ 50	18.299	77	4.596	347
9.038	0.1841	0.32579	224	+343	8.936	5	+ 7	18.369	70	4.248	348
10.035	0.1868	0.32801	222	+320	8.940	4	− 41	18.434	65	3.899	349
11.033	0.1895	0.33022	221	+211	8.944	4	− 80	18.494	60	3.550	349
12.030	0.1923	+0.33243	221	+ 35	−8.947	3	−104	−18.547	53	+ 3.199	351
13.027	0.1950	0.33463	220	−173	8.949	2	−106	18.596	49	2.848	351
14.025	0.1977	0.33682	219	−363	8.951	2	− 84	18.638	42	2.496	352
15.022	0.2005	0.33900	218	−483	8.952	1	− 41	18.675	37	2.143	353
16.019	0.2032	0.34117	217	−498	8.953	1	+ 12	18.706	31	1.790	353
17.016	0.2059	0.34333	216	−398	8.953	0	+ 62	18.732	26	1.436	354
18.014	0.2086	+0.34549	216	−198	−8.952	1	+ 99	−18.751	19	+ 1.083	353
19.011	0.2114	0.34765	216	+ 56	8.951	1	+113	18.766	15	0.729	354
20.008	0.2141	0.34981	216	+306	8.949	2	+ 98	18.775	9	0.375	354
21.005	0.2168	0.35197	216	+498	8.946	3	+ 61	18.778	3	+ 0.021	354
22.003	0.2196	0.35412	215	+585	8.943	3	+ 12	18.776	2	− 0.333	354
23.000	0.2223	+0.35628	216	+559	−8.939	4	− 39	−18.768	8	− 0.686	353

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Welt-Zeit	t	A	Δ	A'	B	Δ	B'	C	Δ	D	Δ
1933	a			in 0.00001	"		in 0.001 "	"		"	
März 23.000	0.2223	+0.35628		+559	−8.939		− 39	−18.768		− 0.686	
23.997	0.2250	0.35843	215	+432	8.934	5	− 80	18.754	14	1.039	353
24.994	0.2278	0.36059	216	+238	8.928	6	−103	18.735	19	1.391	352
25.992	0.2305	0.36276	217	+ 20	8.922	6	−104	18.710	25	1.743	352
26.989	0.2332	0.36493	217	−178	8.915	7	− 85	18.679	31	2.094	351
27.986	0.2360	0.36711	218	−325	8.908	7	− 51	18.643	36	2.444	350
28.984	0.2387	+0.36929	218	−399	−8.900	8	− 9	−18.602	41	− 2.794	350
29.981	0.2414	0.37148	219	−398	8.892	8	+ 35	18.555	47	3.142	348
30.978	0.2441	0.37368	220	−330	8.883	9	+ 69	18.503	52	3.489	347
31.975	0.2469	0.37588	220	−210	8.873	10	+ 92	18.445	58	3.835	346
April 1.973	0.2496	0.37810	222	− 60	8.862	11	+100	18.382	63	4.180	345
2.970	0.2523	0.38033	223	+ 96	8.851	11	+ 90	18.314	68	4.523	343
3.967	0.2551	+0.38257	224	+226	−8.839	12	+ 63	−18.240	74	− 4.864	341
4.964	0.2578	0.38483	226	+308	8.826	13	+ 24	18.161	79	5.204	340
5.962	0.2605	0.38710	227	+312	8.813	13	− 23	18.076	85	5.542	338
6.959	0.2633	0.38939	229	+234	8.800	13	− 66	17.987	89	5.879	337
7.956	0.2660	0.39169	230	+ 81	8.786	14	− 96	17.892	95	6.214	335
8.954	0.2687	0.39401	232	−116	8.772	14	−109	17.792	100	6.546	332
9.951	0.2714	+0.39634	233	−315	−8.758	14	− 96	−17.687	105	− 6.876	330
10.948	0.2742	0.39870	236	−459	8.743	15	− 61	17.577	110	7.205	329
11.945	0.2769	0.40107	237	−513	8.727	16	− 10	17.461	116	7.530	325
12.943	0.2796	0.40346	239	−447	8.711	16	+ 44	17.341	120	7.854	324
13.940	0.2824	0.40587	241	−277	8.694	17	+ 86	17.216	125	8.175	321
14.937	0.2851	0.40830	243	− 31	8.676	18	+110	17.085	131	8.493	318
15.934	0.2878	+0.41075	245	+235	−8.659	17	+106	−16.950	135	− 8.810	317
16.932	0.2905	0.41323	248	+459	8.641	18	+ 79	16.810	140	9.123	313
17.929	0.2933	0.41573	250	+594	8.622	19	+ 33	16.665	145	9.433	310
18.926	0.2960	0.41825	252	+611	8.603	19	− 20	16.516	149	9.741	308
19.924	0.2988	0.42080	255	+518	8.584	19	− 67	16.361	155	10.045	304
20.921	0.3015	0.42337	257	+340	8.565	19	− 97	16.202	159	10.346	301
21.918	0.3042	+0.42597	260	+120	−8.545	20	−107	−16.039	163	−10.645	299
22.915	0.3069	0.42859	262	− 95	8.525	20	− 94	15.871	168	10.940	295
23.913	0.3097	0.43123	264	−268	8.505	20	− 64	15.699	172	11.232	292
24.910	0.3124	0.43390	267	−371	8.485	20	− 24	15.522	177	11.521	289
25.907	0.3151	0.43660	270	−399	8.464	21	+ 19	15.340	182	11.805	284
26.904	0.3179	0.43933	273	−355	8.443	21	+ 57	15.155	185	12.087	282
27.902	0.3206	+0.44208	275	−252	−8.422	21	+ 86	−14.965	190	−12.364	277
28.899	0.3233	0.44485	277	−111	8.401	21	+ 98	14.771	194	12.639	275
29.896	0.3261	0.44766	281	+ 43	8.380	21	+ 96	14.573	198	12.909	270
30.893	0.3288	0.45049	283	+181	8.358	22	+ 74	14.371	202	13.175	266
Mai 1.891	0.3315	0.45335	286	+276	8.337	21	+ 39	14.165	206	13.438	263
2.888	0.3342	+0.45623	288	+304	−8.316	21	− 6	−13.954	211	−13.696	258

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Welt-Zeit		t	A		A'	B		B'	C		D	
1933		a			in 0.00001	″		in 0.″001	″		″	
Mai	2.888	0.3342	+0.45623		+304	−8.316		− 6	−13.954		−13.696	
	3.885	0.3370	0.45914	291	+252	8.294	22	− 49	13.741	213	13.951	255
	4.883	0.3397	0.46209	295	+119	8.272	22	− 86	13.523	218	14.202	251
	5.880	0.3424	0.46506	297	− 68	8.250	22	−106	13.301	222	14.448	246
	6.877	0.3452	0.46806	300	−274	8.229	21	−103	13.076	225	14.690	242
	7.874	0.3479	0.47108	302	−448	8.207	22	− 76	12.847	229	14.928	238
	8.872	0.3506	+0.47413	305	−538	−8.186	21	− 31	−12.615	232	−15.162	234
	9.869	0.3534	0.47721	308	−517	8.164	22	+ 23	12.380	235	15.392	230
	10.866	0.3561	0.48032	311	−379	8.143	21	+ 71	12.140	240	15.616	224
	11.863	0.3588	0.48345	313	−149	8.121	22	+103	11.898	242	15.836	220
	12.861	0.3615	0.48661	316	+124	8.100	21	+111	11.652	246	16.051	215
	13.858	0.3643	0.48980	319	+382	8.079	21	+ 93	11.403	249	16.262	211
	14.855	0.3670	+0.49301	321	+565	−8.058	21	+ 53	−11.151	252	−16.469	207
	15.853	0.3697	0.49625	324	+639	8.037	21	+ 2	10.896	255	16.670	201
	16.850	0.3725	0.49952	327	+592	8.017	20	− 49	10.638	258	16.867	197
	17.847	0.3752	0.50281	329	+445	7.996	21	− 86	10.377	261	17.059	192
	18.844	0.3779	0.50612	331	+234	7.976	20	−106	10.113	264	17.246	187
	19.842	0.3807	0.50946	334	+ 8	7.956	20	−102	9.847	266	17.428	182
	20.839	0.3834	+0.51282	336	−188	−7.936	20	− 79	− 9.578	269	−17.606	178
	21.836	0.3861	0.51620	338	−321	7.917	19	− 41	9.306	272	17.778	172
	22.833	0.3889	0.51960	340	−380	7.898	19	+ 3	9.032	274	17.946	168
	23.831	0.3916	0.52303	343	−359	7.879	19	+ 44	8.755	277	18.108	162
	24.828	0.3943	0.52648	345	−275	7.861	18	+ 76	8.476	279	18.265	157
	25.825	0.3970	0.52995	347	−145	7.843	18	+ 95	8.195	281	18.416	151
	26.823	0.3998	+0.53345	350	+ 6	−7.825	18	+ 98	− 7.912	283	−18.563	147
	27.820	0.4025	0.53697	352	+149	7.808	17	+ 85	7.627	285	18.704	141
	28.817	0.4052	0.54051	354	+259	7.791	17	+ 54	7.339	288	18.841	137
	29.814	0.4080	0.54406	355	+309	7.775	16	+ 12	7.050	289	18.971	130
	30.812	0.4107	0.54763	357	+283	7.759	16	− 33	6.758	292	19.097	126
	31.809	0.4134	0.55121	358	+171	7.744	15	− 73	6.464	294	19.217	120
Juni	1.806	0.4162	+0.55481	360	− 5	−7.729	15	−100	− 6.170	294	−19.332	115
	2.803	0.4189	0.55843	362	−216	7.714	15	−106	5.873	297	19.442	110
	3.801	0.4216	0.56207	364	−414	7.700	14	− 88	5.576	297	19.545	103
	4.798	0.4243	0.56572	365	−550	7.686	14	− 50	5.276	300	19.644	99
	5.795	0.4271	0.56939	367	−581	7.673	13	+ 1	4.975	301	19.737	93
	6.792	0.4298	0.57307	368	−490	7.660	13	+ 53	4.673	302	19.825	88
	7.790	0.4325	+0.57676	369	−292	−7.648	12	+ 92	− 4.370	303	−19.907	82
	8.787	0.4353	0.58046	370	− 25	7.636	12	+110	4.065	305	19.984	77
	9.784	0.4380	0.58418	372	+255	7.625	11	+103	3.759	306	20.054	70
	10.782	0.4407	0.58790	372	+484	7.615	10	+ 70	3.452	307	20.120	66
	11.779	0.4435	0.59163	373	+615	7.605	10	+ 22	2.145	307	20.180	60
	12.776	0.4462	+0.59537	374	+625	−7.596	9	− 31	− 2.836	309	−20.234	54

Reduktionsgrößen 1933

für 12ʰ Sternzeit Greenwich

Welt-Zeit	t	A	Δ	A'	B	Δ	B'	C	Δ	D	Δ
1933	a			in 0.00001	″		in 0.001	″		″	
Juni 12.776	0.4462	+0.59537	375	+625	−7.596	9	− 31	−2.836	308	−20.234	48
13.773	0.4489	0.59912	376	+522	7.587	8	− 75	2.528	310	20.282	44
14.771	0.4517	0.60288	377	+335	7.579	8	−101	2.218	310	20.326	37
15.768	0.4544	0.60665	376	+114	7.571	7	−106	1.908	310	20.363	32
16.765	0.4571	0.61041	377	− 97	7.564	7	− 89	1.598	312	20.395	26
17.762	0.4598	0.61418	377	−256	7.557	6	− 57	1.286	311	20.421	20
18.760	0.4626	+0.61795	377	−344	−7.551	6	− 15	−0.975	312	−20.441	15
19.757	0.4653	0.62172	378	−353	7.545	5	+ 29	0.663	312	20.456	9
20.754	0.4680	0.62550	378	−291	7.540	4	+ 65	0.351	312	20.465	4
21.752	0.4708	0.62928	378	−173	7.536	4	+ 90	−0.039	311	20.469	2
22.749	0.4735	0.63306	377	− 28	7.532	3	+ 98	+0.272	312	20.467	8
23.746	0.4762	0.63683	378	+123	7.529	3	+ 91	0.584	311	20.459	13
24.743	0.4790	+0.64061	378	+248	−7.526	2	+ 66	+0.895	311	−20.446	19
25.741	0.4817	0.64439	377	+322	7.524	2	+ 29	1.206	311	20.427	25
26.738	0.4844	0.64816	376	+326	7.522	1	− 15	1.517	311	20.402	31
27.735	0.4871	0.65192	376	+243	7.521	0	− 57	1.828	310	20.371	35
28.732	0.4899	0.65568	375	+ 88	7.521	0	− 90	2.138	310	20.336	41
29.730	0.4926	0.65943	374	−121	7.521	1	−105	2.448	308	20.295	48
30.727	0.4953	+0.66317	374	−338	−7.522	1	− 98	+2.756	308	−20.247	52
Juli 1.724	0.4981	0.66691	373	−514	7.523	2	− 68	3.064	307	20.195	58
2.722	0.5008	0.67064	372	−600	7.525	2	− 20	3.371	306	20.137	64
3.719	0.5035	0.67436	371	−568	7.527	3	+ 33	3.677	305	20.073	70
4.716	0.5063	0.67807	369	−417	7.530	4	+ 78	3.982	304	20.003	74
5.713	0.5090	0.68176	368	−178	7.534	4	+107	4.286	303	19.929	80
6.711	0.5117	+0.68544	367	+101	−7.538	5	+110	+4.589	301	−19.849	86
7.708	0.5145	0.68911	366	+359	7.543	5	+ 86	4.890	300	19.763	92
8.705	0.5172	0.69277	365	+540	7.548	6	+ 44	5.190	299	19.671	96
9.702	0.5199	0.69642	363	+605	7.554	6	− 10	5.489	297	19.575	103
10.700	0.5226	0.70005	362	+554	7.560	7	− 58	5.786	295	19.472	107
11.697	0.5254	0.70367	360	+403	7.567	7	− 93	6.081	295	19.365	113
12.694	0.5281	+0.70727	357	+198	−7.574	7	−108	+6.376	292	−19.252	118
13.691	0.5308	0.71084	356	− 17	7.581	7	− 99	6.668	291	19.134	123
14.689	0.5336	0.71440	355	−195	7.588	8	− 71	6.959	288	19.011	128
15.686	0.5363	0.71795	352	−310	7.596	9	− 31	7.247	287	18.883	133
16.683	0.5390	0.72147	351	−345	7.605	9	+ 14	7.534	284	18.750	139
17.681	0.5418	0.72498	349	−306	7.614	10	+ 53	7.818	282	18.611	145
18.678	0.5445	+0.72847	347	−205	−7.624	10	+ 83	+8.100	281	−18.466	149
19.675	0.5472	0.73194	345	− 67	7.634	10	+ 98	8.381	278	18.317	155
20.672	0.5499	0.73539	342	+ 86	7.644	11	+ 95	8.659	276	18.162	159
21.670	0.5527	0.73881	340	+227	7.655	11	+ 76	8.935	273	18.003	164
22.667	0.5554	0.74221	338	+322	7.666	11	+ 44	9.208	270	17.839	169
23.664	0.5581	+0.74559		+356	−7.677		+ 1	+9.478		−17.670	

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Welt-Zeit	t	A	Δ	A'	B	Δ	B'	C	Δ	D	Δ
1933	ʰ			in 0.00001	″		in 0.″001	″		″	
Juli 23.664	0.5581	+0.74559		+356	−7.677		+ 1	+ 9.478		−17.670	
24.661	0.5609	0.74894	335	+309	7.688	11	− 42	9.747	269	17.496	174
25.659	0.5636	0.75227	333	+182	7.700	12	− 79	10.012	265	17.317	179
26.656	0.5663	0.75557	330	− 8	7.712	12	−103	10.275	263	17.133	184
27.653	0.5691	0.75885	328	−228	7.724	12	−103	10.535	260	16.944	189
28.651	0.5718	0.76211	326	−428	7.736	12	− 82	10.792	257	16.751	193
29.648	0.5745	+0.76534	323	−561	−7.749	13	− 41	+11.046	254	−16.553	198
30.645	0.5773	0.76854	320	−588	7.762	13	+ 11	11.298	252	16.350	203
31.643	0.5800	0.77172	318	−496	7.775	13	+ 60	11.546	248	16.142	208
Aug. 1.640	0.5827	0.77487	315	−296	7.788	13	+ 99	11.791	245	15.931	211
2.637	0.5854	0.77800	313	− 36	7.801	13	+111	12.032	241	15.714	217
3.634	0.5882	0.78110	310	+231	7.814	13	+ 97	12.271	239	15.494	220
4.631	0.5909	+0.78418	308	+443	−7.828	14	+ 62	+12.507	236	−15.269	225
5.629	0.5936	0.78723	305	+556	7.842	14	+ 13	12.738	231	15.039	230
6.626	0.5964	0.79025	302	+553	7.856	14	− 40	12.967	229	14.805	234
7.623	0.5991	0.79324	299	+440	7.869	13	− 82	13.191	224	14.567	238
8.620	0.6018	0.79620	296	+256	7.883	14	−105	13.413	222	14.325	242
9.618	0.6046	0.79914	294	+ 42	7.897	14	−105	13.630	217	14.079	246
10.615	0.6073	+0.80205	291	−149	−7.911	14	− 83	+13.844	214	−13.830	249
11.612	0.6100	0.80493	288	−284	7.925	14	− 48	14.054	210	13.576	254
12.610	0.6127	0.80779	286	−343	7.938	13	− 2	14.259	205	13.317	259
13.607	0.6155	0.81062	283	−328	7.952	14	+ 39	14.462	203	13.056	261
14.604	0.6182	0.81342	280	−245	7.965	13	+ 73	14.660	198	12.791	265
15.601	0.6209	0.81620	278	−115	7.979	14	+ 95	14.854	194	12.522	269
16.599	0.6237	+0.81896	276	+ 37	−7.992	13	+ 98	+15.045	191	−12.249	273
17.596	0.6264	0.82169	273	+184	8.005	13	+ 85	15.231	186	11.973	276
18.593	0.6291	0.82438	269	+298	8.017	12	+ 59	15.412	181	11.693	280
19.590	0.6319	0.82705	267	+359	8.030	13	+ 18	15.590	178	11.410	283
20.588	0.6346	0.82970	265	+347	8.042	12	− 25	15.764	174	11.124	286
21.585	0.6373	0.83232	262	+254	8.055	13	− 65	15.932	168	10.834	290
22.582	0.6401	+0.83491	259	+ 91	−8.067	12	− 97	+16.097	165	−10.541	293
23.580	0.6428	0.83748	257	−116	8.079	12	−105	16.256	159	10.245	296
24.577	0.6455	0.84003	255	−325	8.090	11	− 93	16.412	156	9.946	299
25.574	0.6482	0.84255	252	−488	8.101	11	− 59	16.563	151	9.645	301
26.571	0.6510	0.84505	250	−562	8.111	10	− 11	16.709	146	9.340	305
27.569	0.6537	0.84753	248	−520	8.122	11	+ 41	16.851	142	9.032	308
28.566	0.6564	+0.84998	245	−365	−8.132	10	+ 86	+16.988	137	− 8.722	310
29.563	0.6592	0.85241	243	−133	8.141	9	+108	17.120	132	8.409	313
30.560	0.6619	0.85483	242	+129	8.150	9	+105	17.247	127	8.094	315
31.558	0.6646	0.85722	239	+363	8.159	9	+ 78	17.370	123	7.776	318
Sept. 1.555	0.6674	0.85959	237	+513	8.167	8	+ 34	17.487	117	7.456	320
2.552	0.6701	+0.86194	235	+550	−8.175	8	− 20	+17.600	113	− 7.134	322

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Welt-Zeit	t	A	Δ	A′	B	Δ	B′	C	Δ	D	Δ
1933	a			in 0.00001	"		in 0.001	"		"	
Sept. 2.552	0.6701	+0.86194	234	+550	−8.175	8	− 20	+17.600	108	−7.134	325
3.550	0.6729	0.86428	232	+472	8.183	7	− 67	17.708	103	6.809	326
4.547	0.6755	0.86660	230	+308	8.190	6	− 99	17.811	98	6.483	329
5.544	0.6783	0.86890	228	+103	8.196	6	−108	17.909	93	6.154	330
6.541	0.6810	0.87118	227	−102	8.202	6	− 94	18.002	88	5.824	333
7.539	0.6837	0.87345	225	−260	8.208	5	− 61	18.090	82	5.491	334
8.536	0.6865	+0.87570	223	−346	−8.213	4	− 19	+18.172	77	−5.157	335
9.533	0.6892	0.87793	221	−354	8.217	4	+ 25	18.249	73	4.822	338
10.530	0.6919	0.88014	221	−287	8.221	3	+ 62	18.322	67	4.484	338
11.528	0.6947	0.88235	220	−172	8.224	2	+ 90	18.389	62	4.146	341
12.525	0.6974	0.88455	219	− 26	8.226	2	+ 98	18.451	56	3.805	341
13.522	0.7001	0.88674	218	+124	8.228	2	+ 91	18.507	52	3.464	343
14.519	0.7029	+0.88892	218	+251	−8.230	1	+ 68	+18.559	45	−3.121	344
15.517	0.7056	0.89110	216	+333	8.231	1	+ 34	18.604	41	2.777	344
16.514	0.7083	0.89326	215	+350	8.232	0	− 10	18.645	35	2.433	346
17.511	0.7110	0.89541	215	+289	8.232	1	− 51	18.680	30	2.087	346
18.509	0.7138	0.89756	214	+157	8.231	1	− 87	18.710	24	1.741	347
19.506	0.7165	0.89970	213	− 31	8.230	2	−104	18.734	19	1.394	348
20.503	0.7192	+0.90183	213	−238	−8.228	3	− 99	+18.753	14	−1.046	348
21.500	0.7220	0.90396	213	−416	8.225	4	− 75	18.767	8	0.698	348
22.498	0.7247	0.90609	213	−524	8.221	4	− 30	18.775	3	0.350	349
23.495	0.7274	0.90822	213	−523	8.217	5	+ 21	18.778	3	−0.001	349
24.492	0.7302	0.91035	214	−411	8.212	5	+ 69	18.775	8	+0.348	349
25.489	0.7329	0.91249	213	−202	8.207	6	+102	18.767	13	0.697	349
26.487	0.7356	+0.91462	214	+ 55	−8.201	6	+110	+18.754	20	+1.046	349
27.484	0.7383	0.91676	214	+300	8.195	7	+ 92	18.734	24	1.395	349
28.481	0.7411	0.91890	214	+484	8.188	8	+ 53	18.710	31	1.744	349
29.479	0.7438	0.92104	215	+560	8.180	8	0	18.679	35	2.093	348
30.476	0.7465	0.92319	216	+520	8.172	9	− 49	18.644	41	2.441	347
Okt. 1.473	0.7493	0.92535	217	+378	8.163	10	− 88	18.603	46	2.788	347
2.470	0.7520	+0.92752	217	+178	−8.153	10	−107	+18.557	53	+3.135	347
3.467	0.7547	0.92969	218	− 37	8.143	11	−101	18.504	57	3.482	345
4.465	0.7575	0.93187	219	−220	8.132	12	− 76	18.447	63	3.827	344
5.462	0.7602	0.93406	220	−336	8.120	13	− 36	18.384	68	4.171	344
6.459	0.7629	0.93626	221	−372	8.107	13	+ 9	18.316	74	4.515	342
7.457	0.7657	0.93847	223	−330	8.094	13	+ 50	18.242	80	4.857	341
8.454	0.7684	+0.94070	224	−228	−8.081	14	+ 81	+18.162	84	+5.198	340
9.451	0.7711	0.94294	226	− 88	8.067	14	+ 96	18.078	91	5.538	338
10.448	0.7738	0.94520	228	+ 63	8.053	15	+ 96	17.987	95	5.876	336
11.446	0.7766	0.94748	230	+200	8.038	16	+ 79	17.892	101	6.212	336
12.443	0.7793	0.94978	231	+297	8.022	16	+ 47	17.791	106	6.548	333
13.440	0.7820	+0.95209		+333	−8.006		+ 7	+17.685		+6.881	

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Welt-Zeit	t	A		A′	B		B′	C		D	
1933	a			in 0.00001	"		in 0.001	"		"	
Okt. 13.440	0.7820	+0.95209	233	+333	−8.006	17	+ 7	+17.685	111	+ 6.881	331
14.438	0.7848	0.95442	236	+300	7.989	17	− 36	17.574	117	7.212	330
15.435	0.7875	0.95678	237	+191	7.972	18	− 73	17.457	122	7.542	327
16.432	0.7902	0.95915	238	+ 25	7.954	19	− 98	17.335	128	7.869	325
17.429	0.7930	0.96153	241	−178	7.935	19	−104	17.207	132	8.194	324
18.427	0.7957	0.96394	244	−367	7.916	19	− 86	17.075	138	8.518	320
19.424	0.7984	+0.96638	246	−500	−7.897	19	− 50	+16.937	143	+ 8.838	318
20.421	0.8011	0.96884	249	−538	7.878	20	+ 1	16.794	147	9.156	316
21.418	0.8039	0.97133	251	−464	7.858	20	+ 51	16.647	153	9.472	313
22.416	0.8066	0.97384	254	−282	7.838	20	+ 90	16.494	158	9.785	310
23.413	0.8093	0.97638	256	− 34	7.818	21	+110	16.336	163	10.095	307
24.410	0.8121	0.97894	259	+229	7.797	22	+102	16.173	169	10.402	305
25.408	0.8148	+0.98153	261	+447	−7.775	21	+ 70	+16.004	173	+10.707	301
26.405	0.8175	0.98414	264	+571	7.754	22	+ 22	15.831	178	11.008	298
27.402	0.8203	0.98678	267	+577	7.732	23	− 32	15.653	182	11.306	294
28.399	0.8230	0.98945	270	+469	7.709	23	− 76	15.471	187	11.600	292
29.397	0.8257	0.99215	273	+281	7.686	23	−104	15.284	193	11.892	289
30.394	0.8285	0.99488	276	+ 59	7.663	23	−107	15.091	197	12.181	284
31.391	0.8312	+0.99764	279	−148	−7.640	24	− 89	+14.894	201	+12.465	281
Nov. 1.388	0.8339	1.00043	282	−295	7.616	24	− 54	14.693	206	12.746	277
2.386	0.8366	1.00325	285	−367	7.592	23	− 8	14.487	211	13.023	273
3.383	0.8394	1.00610	288	−353	7.569	24	+ 35	14.276	215	13.296	270
4.380	0.8421	1.00898	291	−272	7.545	24	+ 71	14.061	219	13.566	266
5.378	0.8448	1.01189	294	−140	7.521	24	+ 93	13.842	223	13.832	261
6.375	0.8476	+1.01483	297	+ 11	−7.497	24	+ 98	+13.619	229	+14.093	257
7.372	0.8503	1.01780	301	+154	7.473	25	+ 87	13.390	232	14.350	253
8.369	0.8530	1.02081	304	+265	7.448	24	+ 60	13.158	236	14.603	249
9.367	0.8558	1.02385	307	+319	7.424	24	+ 22	12.922	241	14.852	244
10.364	0.8585	1.02692	310	+309	7.400	24	− 19	12.681	244	15.096	240
11.361	0.8612	1.03002	313	+221	7.376	24	− 59	12.437	248	15.336	235
12.358	0.8639	+1.03315	316	+ 70	−7.352	24	− 90	+12.189	252	+15.571	230
13.356	0.8667	1.03631	320	−127	7.328	24	−102	11.937	256	15.801	225
14.353	0.8694	1.03951	323	−328	7.304	23	− 94	11.681	259	16.026	221
15.350	0.8721	1.04274	325	−488	7.281	23	− 65	11.422	264	16.247	216
16.347	0.8749	1.04599	329	−566	7.258	23	− 19	11.158	267	16.463	211
17.345	0.8776	1.04928	332	−534	7.235	23	+ 32	10.891	271	16.674	206
18.342	0.8803	+1.05260	335	−387	−7.212	23	+ 77	+10.620	273	+16.880	201
19.339	0.8831	1.05595	337	−152	7.189	22	+104	10.347	277	17.081	196
20.337	0.8858	1.05932	340	+120	7.167	23	+109	10.070	280	17.277	190
21.334	0.8885	1.06272	344	+373	7.144	22	+ 86	9.790	283	17.467	185
22.331	0.8913	1.06616	346	+547	7.122	22	+ 43	9.507	287	17.652	180
23.328	0.8940	+1.06962		+611	−7.100		− 10	+ 9.220		+17.832	

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Welt-Zeit	t	A		A'	B		B'	C		D	
1933	°			in 0.00001	"		in 0.001	"		"	
Nov. 23.328	0.8940	+1.06962	349	+611	−7.100	21	−10	+9.220	289	+17.832	173
24.326	0.8967	1.07311	351	+549	7.079	21	−59	8.931	293	18.005	169
25.323	0.8994	1.07662	354	+390	7.058	20	−95	8.638	295	18.174	163
26.320	0.9022	1.08016	357	+175	7.038	20	−109	8.343	297	18.337	157
27.317	0.9049	1.08373	359	−47	7.018	20	−99	8.046	301	18.494	152
28.315	0.9076	1.08732	362	−224	6.998	20	−69	7.745	303	18.646	146
29.312	0.9104	+1.09094	364	−330	−6.978	19	−27	+7.442	305	+18.792	140
30.309	0.9131	1.09458	367	−350	6.959	19	+19	7.137	307	18.932	135
Dez. 1.307	0.9158	1.09825	369	−290	6.940	18	+59	6.830	310	19.067	128
2.304	0.9186	1.10194	371	−175	6.922	18	+86	6.520	312	19.195	123
3.301	0.9213	1.10565	372	−30	6.904	17	+99	6.208	314	19.318	116
4.298	0.9240	1.10937	374	+119	6.887	16	+92	5.894	316	19.434	111
5.296	0.9267	+1.11311	376	+242	−6.871	16	+72	+5.578	317	+19.545	104
6.293	0.9295	1.11687	378	+317	6.855	15	+38	5.261	320	19.649	98
7.290	0.9322	1.12065	380	+328	6.840	15	−3	4.941	321	19.747	92
8.287	0.9349	1.12445	382	+266	6.825	14	−44	4.620	323	19.839	86
9.285	0.9377	1.12827	383	+130	6.811	13	−79	4.297	323	19.925	81
10.282	0.9404	1.13210	384	−60	6.798	13	−99	3.974	326	20.006	73
11.279	0.9431	+1.13594	386	−270	−6.785	13	−99	+3.648	326	+20.079	67
12.277	0.9459	1.13980	387	−459	6.772	12	−78	3.322	328	20.146	61
13.274	0.9486	1.14367	387	−579	6.760	11	−38	2.994	329	20.207	54
14.271	0.9513	1.14754	389	−599	6.749	10	+12	2.665	329	20.261	49
15.268	0.9541	1.15143	390	−500	6.739	10	+59	2.336	331	20.310	42
16.266	0.9568	1.15533	390	−295	6.729	9	+95	2.005	331	20.352	35
17.263	0.9595	+1.15923	391	−26	−6.720	8	+110	+1.674	331	+20.387	30
18.260	0.9622	1.16314	391	+247	6.712	7	+97	1.343	332	20.417	22
19.257	0.9650	1.16705	392	+468	6.705	7	+62	1.011	333	20.439	16
20.255	0.9677	1.17097	392	+590	6.698	6	+12	0.678	333	20.455	10
21.252	0.9704	1.17489	392	+587	6.692	6	−40	0.345	333	20.465	3
22.249	0.9732	1.17881	392	+472	6.686	5	−83	+0.012	333	20.468	3
23.246	0.9759	+1.18273	393	+280	−6.681	4	−107	−0.321	333	+20.465	9
24.244	0.9786	1.18666	392	+58	6.677	3	−105	0.654	333	20.456	16
25.241	0.9814	1.19058	392	−141	6.674	3	−83	0.987	332	20.440	22
26.238	0.9841	1.19450	391	−277	6.671	2	−43	1.319	332	20.418	29
27.236	0.9868	1.19841	391	−328	6.669	2	+3	1.651	332	20.389	35
28.233	0.9895	1.20232	390	−298	6.667	1	+45	1.983	330	20.354	42
29.230	0.9923	+1.20622	390	−201	−6.666	0	+79	−2.313	330	+20.312	48
30.227	0.9950	1.21012	389	−63	6.666	1	+96	2.643	330	20.264	54
31.224	0.9977	1.21401	387	+87	6.667	1	+97	2.973	329	20.210	60
32.222	1.0005	+1.21788		+222	−6.668		+81	−3.302		+20.150	

Übertragung mittlerer Sternörter

von dem Äquinoktium t_1 auf $t_2 = 1933.0$

t_1	$m^s(t_2-t_1)$	$\log[n^s(t_2-t_1)]$	$\log[n''(t_2-t_1)]$
	m s		
1755	+9 6.691	2.376479	3.552570
1790	7 19.241	2.281363	3.457454
1800	6 48.537	2.249869	3.425960
1810	6 17.832	2.215913	3.392004
1825	5 31.770	2.159418	3.335509
1830	+5 16.415	2.138827	3.314918
1835	5 1.059	2.117211	3.293302
1840	4 45.704	2.094463	3.270554
1845	4 30.347	2.070459	3.246550
1850	4 14.991	2.045049	3.221140
1855	+3 59.634	2.018061	3.194152
1860	3 44.276	1.98928	3.165375
1865	3 28.918	1.95847	3.134557
1870	3 13.559	1.92529	3.101384
1875	2 58.200	1.88938	3.065467
1880	+2 42.840	1.85022	3.026310
1885	2 27.480	1.80718	2.98327
1890	2 12.119	1.75940	2.93549
1895	1 56.759	1.70571	2.88180
1900	1 41.397	1.64444	2.82053
1905	+1 26.035	1.57308	2.74917
1910	1 10.673	1.48764	2.66373
1915	0 55.310	1.38118	2.55727
1920	0 39.947	1.23985	2.41594
1925	0 24.583	1.02899	2.20508
1930	+0 9.219	0.60302	1.77911
1935	−0 6.146	0.42692_n	1.60301_n

Sind α_1, δ_1 die Koordinaten für t_1 und α_2, δ_2 jene für $t_2 = 1933.0$, ist ferner α', δ' der genäherte Sternort für die Zeit

$$\frac{1}{2}(t_1 + t_2),$$

so ist

$$\alpha_2 = \alpha_1 + m^s(t_2 - t_1) + [n^s(t_2 - t_1)] \sin\alpha' \operatorname{tg}\delta'$$
$$\delta_2 = \delta_1 + [n''(t_2 - t_1)] \cos\alpha'$$

Übertragung mittlerer Polsternörter

von dem Äquinoktium t_1 auf $t_2 = 1933.0$

t_1	$90° - (N)$	$(m) + (N) - 90°$	(n)
	′ ″	′ ″	′ ″
1755	+68 19.02	+68 21.53	+59 28.95
1790	54 53.55	54 55.18	47 47.05
1800	51 3.37	51 4.77	44 26.51
1810	47 13.17	47 14.37	41 5.98
1825	41 27.83	41 28.76	36 5.20
1830	+39 32.71	+39 33.55	+34 24.94
1835	37 37.58	37 38.34	32 44.68
1840	35 42.45	35 43.13	31 4.43
1845	33 47.31	33 47.92	29 24.17
1850	31 52.16	31 52.71	27 43.92
1855	+29 57.01	+29 57.50	+26 3.68
1860	28 1.86	28 2.29	24 23.42
1865	26 6.70	26 7.07	22 43.18
1870	24 11.54	24 11.86	21 2.93
1875	22 16.37	22 16.64	19 22.69
1880	+20 21.19	+20 21.42	+17 42.45
1885	18 26.01	18 26.19	16 2.20
1890	16 30.82	16 30.97	14 21.97
1895	14 35.63	14 35.75	12 41.73
1900	12 40.43	12 40.52	11 1.50
1905	+10 45.23	+10 45.29	+ 9 21.26
1910	8 50.02	8 50.07	7 41.03
1915	6 54.81	6 54.84	6 0.80
1920	4 59.59	4 59.60	4 20.58
1925	3 4.36	3 4.37	2 40.35
1930	+ 1 9.13	+ 1 9.14	+ 1 0.13
1935	− 0 46.10	− 0 46.09	− 0 40.09

Sind α_1, δ_1 die Koordinaten für t_1 und α_2, δ_2 jene für $t_2 = 1933.0$, so hat man

zur Reduktion von dem Äquinoktium t_1 auf t_2:

$$a_1 = \alpha_1 + [90° - (N)]$$

$$p_1 = \left(\operatorname{tang} \delta_1 + \cos a_1 \operatorname{tang} \tfrac{1}{2}(n)\right) \sin (n)$$

$$\operatorname{tang} \Delta a_1 = \frac{p_1 \sin a_1}{1 - p_1 \cos a_1}$$

$$\alpha_2 = a_1 + [(m) + (N) - 90°] + \Delta a_1$$

$$\operatorname{tang} \tfrac{1}{2}(\delta_2 - \delta_1) = \cos (a_1 + \tfrac{1}{2}\Delta a_1) \sec \tfrac{1}{2}\Delta a_1 \operatorname{tang} \tfrac{1}{2}(n)$$

zur Reduktion von dem Äquinoktium t_2 auf t_1:

$$a_2 = \alpha_2 - [(m) + (N) - 90°]$$

$$p_2 = -\left(\operatorname{tang} \delta_2 - \cos a_2 \operatorname{tang} \tfrac{1}{2}(n)\right) \sin (n)$$

$$\operatorname{tang} \Delta a_2 = \frac{p_2 \sin a_2}{1 - p_2 \cos a_2}$$

$$\alpha_1 = a_2 - [90° - (N)] + \Delta a_2$$

$$\operatorname{tang} \tfrac{1}{2}(\delta_1 - \delta_2) = -\cos \left(a_2 + \tfrac{1}{2}\Delta a_2\right) \sec \tfrac{1}{2}\Delta a_2 \operatorname{tang} \tfrac{1}{2}(n)$$

Reduktion von Koordinatendifferenzen scheinbarer Örter auf Differenzen mittlerer Örter für den Jahresanfang.

Sind $\Delta\alpha$ und $\Delta\delta$ die gemessenen Koordinatendifferenzen der scheinbaren Örter im Sinne Objekt minus Stern, $d\Delta\alpha$ und $d\Delta\delta$ die an ihnen anzubringenden Korrektionen, um Koordinatendifferenzen zu erhalten, die sich auf das mittlere Äquinoktium des Jahresanfangs beziehen, so wird

$$d\Delta\alpha = (d\Delta\alpha)_1 + (d\Delta\alpha)_2$$
$$d\Delta\delta = (d\Delta\delta)_1 + (d\Delta\delta)_2,$$

wobei

$$(d\Delta\alpha)_1 = -j\cos(G+\alpha)\frac{\operatorname{tg}\delta}{15}\Delta\alpha^{\mathrm{m}} - j\sin(G+\alpha)\frac{\sec^2\delta}{225}\Delta\delta'$$

$$(d\Delta\alpha)_2 = -k\cos(H+\alpha)\frac{\sec\delta}{15}\Delta\alpha^{\mathrm{m}} - k\sin(H+\alpha)\frac{\operatorname{tg}\delta\sec\delta}{225}\Delta\delta'$$

$$(d\Delta\delta)_1 = j\sin(G+\alpha)\Delta\alpha^{\mathrm{m}}$$

$$(d\Delta\delta)_2 = k\sin(H+\alpha)\sin\delta\,\Delta\alpha^{\mathrm{m}} - k\cos(H+\alpha)\frac{\cos\delta}{15}\Delta\delta' + [0.0003\,i\sin\delta\,\Delta\delta']$$

Hierin bezeichnen $(d\Delta\alpha)_1$ und $(d\Delta\delta)_1$ den Einfluß der Präzession und Nutation, $(d\Delta\alpha)_2$ und $(d\Delta\delta)_2$ den Einfluß der Aberration.

Die Größen G, H, j, k, i sind auf S. 238*—255* zu finden. Die Faktoren $\frac{1}{15}\operatorname{tg}\delta$, $\frac{1}{225}\sec^2\delta$, $\frac{1}{15}\sec\delta$, $\frac{1}{225}\operatorname{tg}\delta\sec\delta$, $\sin\delta$, $\frac{1}{15}\cos\delta$ entnehme man der Zusammenstellung auf S. 268*. Die numerischen Werte der Funktionen sinus und cosinus sind auf S. 269* enthalten. $\Delta\alpha^{\mathrm{m}}$ bedeutet die in Zeitminuten ausgedrückte gemessene Rektaszensionsdifferenz, $\Delta\delta'$ ist die in Bogenminuten ausgedrückte gemessene Deklinationsdifferenz. Die Größen $d\Delta\alpha$ und $d\Delta\delta$ ergeben sich in Zeit- bzw. Bogensekunden. Das in eckige Klammern gesetzte Glied $0.0003\,i\sin\delta\,\Delta\delta'$ in der Formel für $(d\Delta\delta)_2$ beträgt für $\Delta\delta' = 10'$ im Maximum $0''.02$ und kann daher in den meisten Fällen unberücksichtigt bleiben.

Reduktionsgrößen 1933

δ	$\frac{1}{15}\operatorname{tg}\delta$	$\frac{1}{225}\sec^2\delta$	$\frac{1}{15}\sec\delta$	$\frac{1}{225}\operatorname{tg}\delta\sec\delta$	$\sin\delta$	$\frac{1}{15}\cos\delta$	$\operatorname{tg}\delta$	$\frac{1}{15}\sec^2\delta$	δ
0°	0.000	0.004	0.067	0.000	0.00	0.07	0.00	0.07	0°
5	0.006	0.004	0.067	0.000	0.09	0.07	0.09	0.07	5
10	0.012	0.005	0.068	0.001	0.17	0.07	0.18	0.07	10
15	0.018	0.005	0.069	0.001	0.26	0.06	0.27	0.07	15
20	0.024	0.005	0.071	0.002	0.34	0.06	0.36	0.08	20
25	0.031	0.005	0.074	0.002	0.42	0.06	0.47	0.08	25
30	0.038	0.006	0.077	0.003	0.50	0.06	0.58	0.09	30
35	0.047	0.007	0.081	0.004	0.57	0.05	0.70	0.10	35
40	0.056	0.008	0.087	0.005	0.64	0.05	0.84	0.11	40
40°	0.056	0.008	0.087	0.005	0.64	0.05	0.84	0.11	40°
42	0.060	0.008	0.090	0.005	0.67	0.05	0.90	0.12	42
44	0.064	0.009	0.093	0.006	0.69	0.05	0.97	0.13	44
46	0.069	0.009	0.096	0.007	0.72	0.05	1.04	0.14	46
48	0.074	0.010	0.100	0.007	0.74	0.04	1.11	0.15	48
50	0.079	0.011	0.104	0.008	0.77	0.04	1.19	0.16	50
52	0.085	0.012	0.108	0.009	0.79	0.04	1.28	0.18	52
54	0.092	0.013	0.113	0.010	0.81	0.04	1.38	0.19	54
56	0.099	0.014	0.119	0.012	0.83	0.04	1.48	0.21	56
58	0.107	0.016	0.126	0.013	0.85	0.04	1.60	0.24	58
60	0.115	0.018	0.133	0.015	0.87	0.03	1.73	0.27	60
60°	0.115	0.018	0.133	0.015	0.87	0.03	1.73	0.27	60°
61	0.120	0.019	0.138	0.017	0.87	0.03	1.80	0.28	61
62	0.125	0.020	0.142	0.018	0.88	0.03	1.88	0.30	62
63	0.131	0.022	0.147	0.019	0.89	0.03	1.96	0.32	63
64	0.137	0.023	0.152	0.021	0.90	0.03	2.05	0.35	64
65	0.143	0.025	0.158	0.023	0.91	0.03	2.14	0.37	65
66	0.150	0.027	0.164	0.025	0.91	0.03	2.25	0.40	66
67	0.157	0.029	0.171	0.027	0.92	0.03	2.36	0.44	67
68	0.165	0.032	0.178	0.029	0.93	0.02	2.48	0.48	68
69	0.174	0.035	0.186	0.032	0.93	0.02	2.61	0.52	69
70	0.183	0.038	0.195	0.036	0.94	0.02	2.75	0.57	70
71	0.194	0.042	0.205	0.040	0.95	0.02	2.90	0.63	71
72	0.205	0.047	0.216	0.044	0.95	0.02	3.08	0.70	72
73	0.218	0.052	0.228	0.050	0.96	0.02	3.27	0.78	73
74	0.232	0.058	0.242	0.056	0.96	0.02	3.49	0.88	74
75	0.249	0.066	0.258	0.064	0.97	0.02	3.73	1.00	75
75.0°	0.249	0.066	0.258	0.064	0.97	0.02	3.73	1.00	75.0°
75.5	0.258	0.071	0.266	0.069	0.97	0.02	3.87	1.06	75.5
76.0	0.267	0.076	0.276	0.074	0.97	0.02	4.01	1.14	76.0
76.5	0.278	0.082	0.286	0.079	0.97	0.02	4.17	1.22	76.5
77.0	0.289	0.088	0.296	0.086	0.97	0.01	4.33	1.32	77.0
77.5	0.301	0.095	0.308	0.093	0.98	0.01	4.51	1.42	77.5
78.0	0.314	0.103	0.321	0.101	0.98	0.01	4.70	1.54	78.0
78.5	0.328	0.112	0.334	0.110	0.98	0.01	4.92	1.68	78.5
79.0	0.343	0.122	0.349	0.120	0.98	0.01	5.14	1.83	79.0
79.5	0.360	0.134	0.366	0.132	0.98	0.01	5.40	2.01	79.5
80.0	0.378	0.147	0.384	0.145	0.98	0.01	5.67	2.21	80.0

Sinus

	0^h	1^h	2^h	3^h	4^h	5^h	
0^m	0.000	0.259	0.500	0.707	0.866	0.966	60
1	0.004	0.263	0.504	0.710	0.868	0.967	59
2	0.009	0.267	0.508	0.713	0.870	0.968	58
3	0.013	0.271	0.511	0.716	0.872	0.969	57
4	0.017	0.276	0.515	0.719	0.875	0.970	56
5	0.022	0.280	0.519	0.722	0.877	0.971	55
6	0.026	0.284	0.522	0.725	0.879	0.972	54
7	0.031	0.288	0.526	0.728	0.881	0.973	53
8	0.035	0.292	0.530	0.731	0.883	0.974	52
9	0.039	0.297	0.534	0.734	0.885	0.975	51
10	0.044	0.301	0.537	0.737	0.887	0.976	50
11	0.048	0.305	0.541	0.740	0.889	0.977	49
12	0.052	0.309	0.545	0.743	0.891	0.978	48
13	0.057	0.313	0.548	0.746	0.893	0.979	47
14	0.061	0.317	0.552	0.749	0.895	0.980	46
15	0.065	0.321	0.556	0.752	0.897	0.981	45
16	0.070	0.326	0.559	0.755	0.899	0.982	44
17	0.074	0.330	0.563	0.758	0.901	0.982	43
18	0.078	0.334	0.566	0.760	0.903	0.983	42
19	0.083	0.338	0.570	0.763	0.904	0.984	41
20	0.087	0.342	0.574	0.766	0.906	0.985	40
21	0.092	0.346	0.577	0.769	0.908	0.986	39
22	0.096	0.350	0.581	0.772	0.910	0.986	38
23	0.100	0.354	0.584	0.774	0.912	0.987	37
24	0.105	0.358	0.588	0.777	0.914	0.988	36
25	0.109	0.362	0.591	0.780	0.915	0.988	35
26	0.113	0.367	0.595	0.783	0.917	0.989	34
27	0.118	0.371	0.598	0.785	0.919	0.990	33
28	0.122	0.375	0.602	0.788	0.921	0.990	32
29	0.126	0.379	0.605	0.791	0.922	0.991	31
30	0.131	0.383	0.609	0.793	0.924	0.991	30
31	0.135	0.387	0.612	0.796	0.926	0.992	29
32	0.139	0.391	0.616	0.799	0.927	0.993	28
33	0.143	0.395	0.619	0.801	0.929	0.993	27
34	0.148	0.399	0.623	0.804	0.930	0.994	26
35	0.152	0.403	0.626	0.806	0.932	0.994	25
36	0.156	0.407	0.629	0.809	0.934	0.995	24
37	0.161	0.411	0.633	0.812	0.935	0.995	23
38	0.165	0.415	0.636	0.814	0.937	0.995	22
39	0.169	0.419	0.639	0.817	0.938	0.996	21
40	0.174	0.423	0.643	0.819	0.940	0.996	20
41	0.178	0.427	0.646	0.822	0.941	0.997	19
42	0.182	0.431	0.649	0.824	0.943	0.997	18
43	0.187	0.434	0.653	0.827	0.944	0.997	17
44	0.191	0.438	0.656	0.829	0.946	0.998	16
45	0.195	0.442	0.659	0.831	0.947	0.998	15
46	0.199	0.446	0.663	0.834	0.948	0.998	14
47	0.204	0.450	0.666	0.836	0.950	0.998	13
48	0.208	0.454	0.669	0.839	0.951	0.999	12
49	0.212	0.458	0.672	0.841	0.952	0.999	11
50	0.216	0.462	0.676	0.843	0.954	0.999	10
51	0.221	0.466	0.679	0.846	0.955	0.999	9
52	0.225	0.469	0.682	0.848	0.956	0.999	8
53	0.229	0.473	0.685	0.850	0.958	1.000	7
54	0.233	0.477	0.688	0.853	0.959	1.000	6
55	0.238	0.481	0.692	0.855	0.960	1.000	5
56	0.242	0.485	0.695	0.857	0.961	1.000	4
57	0.246	0.489	0.698	0.859	0.962	1.000	3
58	0.250	0.492	0.701	0.862	0.964	1.000	2
59	0.255	0.496	0.704	0.864	0.965	1.000	1
60	0.259	0.500	0.707	0.866	0.966	1.000	0
	5^h	4^h	3^h	2^h	1^h	0^h	

Cosinus

Reduktionsgrößen 1933

Übertragung von Rektaszensions- und Deklinationsdifferenzen vom mittleren Äquinoktium 1933.0 auf das Normaläquinoktium 1925.0

α	a_1	a_2	d_1	α	α	a_1	a_2	d_1	α
h m	s	s	"	h m	h m	s	s	"	h m
0 0	−0.0467 −	−0.0000 +	+0.000 −	24 0	6 0	+0.0000 +	−0.0467 +	+0.700 −	18 0
10	466	21	031	50	10	21	466	699	50
20	465	41	061	40	20	41	465	697	40
30	463	61	091	30	30	61	463	694	30
40	459	81	121	20	40	81	459	689	20
50	455	101	151	10	50	101	455	683	10
1 0	−0.0451 −	−0.0121 +	+0.181 −	23 0	7 0	+0.0121 +	−0.0451 +	+0.676 −	17 0
10	445	140	211	50	10	140	445	667	50
20	438	159	239	40	20	159	438	657	40
30	431	179	268	30	30	179	431	647	30
40	423	197	296	20	40	197	423	634	20
50	414	215	323	10	50	215	414	621	10
2 0	−0.0404 −	−0.0233 +	+0.350 −	22 0	8 0	+0.0233 +	−0.0404 +	+0.606 −	16 0
10	393	251	376	50	10	251	393	590	50
20	382	267	401	40	20	267	382	573	40
30	370	284	426	30	30	284	370	555	30
40	357	300	450	20	40	300	357	536	20
50	344	315	473	10	50	315	344	516	10
3 0	−0.0330 −	−0.0330 +	+0.495 −	21 0	9 0	+0.0330 +	−0.0330 +	+0.495 −	15 0
10	315	344	516	50	10	344	315	473	50
20	300	357	536	40	20	357	300	450	40
30	284	370	555	30	30	370	284	426	30
40	267	382	573	20	40	382	267	401	20
50	251	393	590	10	50	393	251	376	10
4 0	−0.0233 −	−0.0404 +	+0.606 −	20 0	10 0	+0.0404 +	−0.0233 +	+0.350 −	14 0
10	215	414	621	50	10	414	215	323	50
20	197	423	634	40	20	423	197	296	40
30	179	431	647	30	30	431	179	268	30
40	159	438	657	20	40	438	159	239	20
50	140	445	667	10	50	445	140	211	10
5 0	−0.0121 −	−0.0451 +	+0.676 −	19 0	11 0	+0.0451 +	−0.0121 +	+0.181 −	13 0
10	101	455	683	50	10	455	101	151	50
20	81	459	689	40	20	459	81	121	40
30	61	463	694	30	30	463	61	091	30
40	41	465	697	20	40	465	41	061	20
50	21	466	699	10	50	466	21	031	10
6 0	−0.0000 −	−0.0467 +	+0.700 −	18 0	12 0	+0.0467 +	−0.0000 +	+0.000 −	12 0

Für α zwischen 12^h und 24^h gelten die Vorzeichen zur Rechten.

$$\Delta p^s_\alpha = a_1 \cdot \operatorname{tg} \delta \cdot \Delta\alpha^m + a_2 \cdot \tfrac{1}{15} \sec^2 \delta \cdot \Delta\delta'; \qquad \Delta p''_\delta = d_1 \cdot \Delta\alpha^m$$

$\Delta\alpha^m$ bedeutet die Rektaszensionsdifferenz in Zeitminuten, $\Delta\delta'$ ist die Deklinationsdifferenz in Bogenminuten.

Die Werte von $\operatorname{tg}\delta$ und $\frac{1}{15}\sec^2\delta$ sind auf S. 268* enthalten.

Reduktion vom mittleren Äquinoktium 1925.0 auf das jedesmalige wahre Äquinoktium

0h Welt-Zeit		f	log g	G	0h Welt-Zeit		f	log g	G
1933		s		h m s	1933		s		h m s
Jan.	0	+24.936	2.21182	23 48 35	Mai	16	+26.111	2.23172	23 49 12
	4	24.985	2.21265	23 48 35		20	26.151	2.23239	23 49 19
	8	25.032	2.21347	23 48 34		24	26.193	2.23308	23 49 26
	12	25.079	2.21428	23 48 32		28	26.236	2.23378	23 49 33
	16	25.124	2.21507	23 48 29	Juni	1	26.280	2.23450	23 49 40
	20	+25.168	2.21584	23 48 26		5	+26.325	2.23523	23 49 45
	24	25.211	2.21658	23 48 22		9	26.370	2.23597	23 49 50
	28	25.252	2.21730	23 48 18		13	26.416	2.23672	23 49 54
Febr.	1	25.292	2.21800	23 48 14		17	26.463	2.23747	23 49 58
	5	25.330	2.21865	23 48 10		21	26.509	2.23823	23 50 1
	9	+25.367	2.21928	23 48 5		25	+26.556	2.23900	23 50 3
	13	25.402	2.21989	23 48 1		29	26.602	2.23976	23 50 4
	17	25.436	2.22047	23 47 57	Juli	3	26.648	2.24051	23 50 5
	21	25.468	2.22103	23 47 53		7	26.694	2.24125	23 50 5
	25	25.499	2.22156	23 47 50		11	26.739	2.24198	23 50 4
März	1	+25.528	2.22207	23 47 47		15	+26.783	2.24269	23 50 3
	5	25.557	2.22256	23 47 45		19	26.826	2.24340	23 50 1
	9	25.585	2.22303	23 47 44		23	26.869	2.24409	23 49 59
	13	25.612	2.22349	23 47 44		27	26.910	2.24476	23 49 56
	17	25.639	2.22395	23 47 45		31	26.950	2.24540	23 49 53
	21	+25.666	2.22440	23 47 46	Aug.	4	+26.988	2.24602	23 49 50
	25	25.692	2.22485	23 47 48		8	27.025	2.24663	23 49 46
	29	25.719	2.22529	23 47 51		12	27.061	2.24721	23 49 43
April	2	25.746	2.22574	23 47 55		16	27.096	2.24777	23 49 39
	6	25.774	2.22620	23 48 0		20	27.129	2.24831	23 49 36
	10	+25.802	2.22668	23 48 5		24	+27.161	2.24883	23 49 33
	14	25.832	2.22717	23 48 11		28	27.192	2.24933	23 49 30
	18	25.862	2.22767	23 48 18	Sept.	1	27.222	2.24980	23 49 28
	22	25.894	2.22818	23 48 25		5	27.251	2.25026	23 49 27
	26	25.927	2.22871	23 48 32		9	27.279	2.25070	23 49 26
	30	+25.961	2.22926	23 48 40		13	+27.306	2.25113	23 49 25
Mai	4	25.996	2.22984	23 48 48		17	27.333	2.25156	23 49 25
	8	26.033	2.23044	23 48 56		21	27.359	2.25198	23 49 26
	12	26.071	2.23107	23 49 4		25	27.385	2.25240	23 49 28
	16	+26.111	2.23172	23 49 12		29	+27.412	2.25281	23 49 31

Reduktionsgrößen 1933

Reduktion vom mittleren Äquinoktium 1925.0 auf das jedesmalige wahre Äquinoktium

0h Welt-Zeit		f	log g	G	0h Welt-Zeit		f	log g	G
1933		s		h m s	1933		s		h m s
Sept.	29	+27.412	2.25281	23 49 31	Nov.	16	+27.795	2.25874	23 50 49
Okt.	3	27.438	2.25323	23 49 34		20	27.836	2.25937	23 50 57
	7	27.465	2.25365	23 49 39		24	27.879	2.26002	23 51 4
	11	27.493	2.25408	23 49 44		28	27.922	2.26069	23 51 11
	15	27.521	2.25452	23 49 49	Dez.	2	27.967	2.26138	23 51 18
	19	+27.551	2.25498	23 49 55		6	+28.013	2.26209	23 51 24
	23	27.582	2.25546	23 50 2		10	28.060	2.26281	23 51 29
	27	27.614	2.25595	23 50 9		14	28.108	2.26354	23 51 34
	31	27.647	2.25646	23 50 17		18	28.156	2.26428	23 51 37
Nov.	4	27.682	2.25700	23 50 25		22	28.204	2.26502	23 51 40
	8	+27.718	2.25756	23 50 33		26	+28.252	2.26576	23 51 42
	12	27.756	2.25814	23 50 41		30	28.301	2.26650	23 51 44
	16	+27.795	2.25874	23 50 49		34	+28.348	2.26723	23 51 44

Die mit den vorstehend gegebenen Größen f, log g und G berechnete Reduktion vom mittleren Äquinoktium 1925.0 auf das wahre Äquinoktium der Epoche bedarf noch einer Verbesserung, die von dem Einfluß der Variatio saecularis herrührt und auf S. 273* enthalten ist. Es wird somit:

$$\text{Red. in } \alpha = f + {}^1/_{15}\, g \sin(G+\alpha) \operatorname{tg}\delta + \text{Korr. nach S. } 273^*$$
$$\text{Red. in } \delta = g \cos(G+\alpha) + \text{Korr. nach S. } 273^*$$

Korrektion der Reduktion vom mittleren Äquinoktium 1925.0 auf das jedesmalige wahre Äquinoktium (s. S. 271*—272*), berechnet für 1933.0, mit Hinzufügung ihrer einjährigen Änderung.

α	δ +60°		+50°		+30°		+10°		−10°		−30°		−50°		−60°	
	Für Rektaszension (in 0.s001)															
0h	+17	+4	+12	+3	+ 6	+2	+ 2	+1	− 1	0	− 5	−1	−11	−3	−16	−4
1	+24	+6	+16	+4	+ 8	+2	+ 3	+1	0	0	− 3	−1	− 6	−2	− 8	−2
2	+27	+7	+17	+4	+ 8	+2	+ 4	+1	+ 1	0	− 1	0	− 2	−1	− 1	0
3	+27	+7	+16	+4	+ 8	+2	+ 4	+1	+ 2	0	0	0	+ 1	0	+ 4	+1
4	+21	+5	+13	+3	+ 6	+2	+ 3	+1	+ 2	0	+ 1	0	+ 2	+1	+ 5	+1
5	+12	+3	+ 7	+2	+ 4	+1	+ 2	+1	+ 1	0	+ 1	0	+ 2	0	+ 4	+1
6	0	0	0	0	0	0	+ 1	0	+ 1	0	+ 1	0	+ 1	0	+ 1	0
7	−11	−3	− 7	−2	− 3	−1	− 1	0	0	0	0	0	0	0	− 2	−1
8	−21	−5	−12	−3	− 5	−1	− 2	−1	0	0	0	0	0	0	− 3	−1
9	−26	−6	−16	−4	− 7	−2	− 3	−1	0	0	+ 1	0	+ 1	0	− 2	−1
10	−26	−7	−16	−4	− 7	−2	− 3	−1	0	0	+ 2	+1	+ 4	+1	+ 2	+1
11	−23	−6	−14	−4	− 6	−2	− 2	−1	+ 1	0	+ 4	+1	+ 8	+2	+ 9	+2
12	−16	−4	−11	−3	− 5	−1	− 1	0	+ 2	+1	+ 6	+2	+12	+3	+17	+4
13	− 8	−2	− 6	−2	− 3	−1	0	0	+ 3	+1	+ 8	+2	+16	+4	+24	+6
14	− 1	0	− 2	−1	− 1	0	+ 1	0	+ 4	+1	+ 8	+2	+17	+4	+27	+7
15	+ 4	+1	+ 1	0	0	0	+ 2	0	+ 4	+1	+ 8	+2	+16	+4	+27	+7
16	+ 5	+1	+ 2	+1	+ 1	0	+ 2	0	+ 3	+1	+ 6	+2	+13	+3	+21	+5
17	+ 4	+1	+ 2	0	+ 1	0	+ 1	0	+ 2	+1	+ 4	+1	+ 7	+2	+12	+3
18	+ 1	0	+ 1	0	+ 1	0	+ 1	0	+ 1	0	0	0	0	0	0	0
19	− 2	−1	0	0	0	0	0	0	− 1	0	− 3	−1	− 7	−2	−11	−3
20	− 3	−1	0	0	0	0	0	0	− 2	−1	− 5	−1	−12	−3	−21	−5
21	− 2	−1	+ 1	0	+ 1	0	0	0	− 3	−1	− 7	−2	−16	−4	−26	−6
22	+ 2	+1	+ 4	+1	+ 2	+1	0	0	− 3	−1	− 7	−2	−16	−4	−26	−7
23	+ 9	+2	+ 8	+2	+ 4	+1	+ 1	0	− 2	−1	− 6	−2	−14	−4	−23	−6
24	+17	+4	+12	+3	+ 6	+2	+ 2	+1	− 1	0	− 5	−1	−11	−3	−16	−4
	Für Deklination (in 0.″01)															
0h	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	− 5	−1	− 4	−1	− 4	−1	− 4	−1	− 4	−1	− 4	−1	− 3	−1	− 3	−1
2	−10	−3	− 9	−2	− 8	−2	− 8	−2	− 7	−2	− 6	−2	− 6	−1	− 5	−1
3	−16	−4	−14	−4	−12	−3	−11	−3	−10	−2	− 9	−2	− 7	−2	− 5	−1
4	−21	−5	−18	−5	−15	−4	−13	−3	−12	−3	−10	−2	− 7	−2	− 4	−1
5	−24	−6	−21	−5	−17	−4	−15	−4	−13	−3	−11	−3	− 7	−2	− 4	−1
6	−25	−6	−22	−5	−18	−4	−15	−4	−13	−3	−11	−3	− 7	−2	− 4	−1
7	−24	−6	−21	−5	−17	−4	−15	−4	−13	−3	−10	−3	− 7	−2	− 4	−1
8	−20	−5	−18	−4	−15	−4	−13	−3	−11	−3	−10	−2	− 7	−2	− 4	−1
9	−15	−4	−14	−3	−12	−3	−10	−3	− 9	−2	− 8	−2	− 6	−2	− 5	−1
10	−10	−2	− 9	−2	− 8	−2	− 7	−2	− 7	−2	− 6	−2	− 5	−1	− 4	−1
11	− 4	−1	− 4	−1	− 4	−1	− 4	−1	− 3	−1	− 3	−1	− 3	−1	− 3	−1
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	+ 3	+1	+ 3	+1	+ 4	+1	+ 4	+1	+ 4	+1	+ 4	+1	+ 4	+1	+ 5	+1
14	+ 5	+1	+ 6	+1	+ 6	+2	+ 7	+2	+ 8	+2	+ 8	+2	+ 9	+2	+10	+3
15	+ 5	+1	+ 7	+2	+ 9	+2	+10	+2	+11	+3	+12	+3	+14	+4	+16	+4
16	+ 4	+1	+ 7	+2	+10	+2	+12	+3	+13	+3	+15	+4	+18	+5	+21	+5
17	+ 4	+1	+ 7	+2	+11	+3	+13	+3	+15	+4	+17	+4	+21	+5	+24	+6
18	+ 4	+1	+ 7	+2	+11	+3	+13	+3	+15	+4	+18	+4	+22	+5	+25	+6
19	+ 4	+1	+ 7	+2	+10	+3	+13	+3	+15	+4	+17	+4	+21	+5	+24	+6
20	+ 4	+1	+ 7	+2	+10	+2	+11	+3	+13	+3	+15	+4	+18	+4	+20	+5
21	+ 5	+1	+ 6	+2	+ 8	+2	+ 9	+2	+10	+3	+12	+3	+14	+3	+15	+4
22	+ 4	+1	+ 5	+1	+ 6	+2	+ 7	+2	+ 7	+2	+ 8	+2	+ 9	+2	+10	+2
23	+ 3	+1	+ 3	+1	+ 3	+1	+ 3	+1	+ 4	+1	+ 4	+1	+ 4	+1	+ 4	+1
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

α	$0^h, 12^h$		$1^h, 13^h$		$2^h, 14^h$		$3^h, 15^h$		$4^h, 16^h$		$5^h, 17^h$		α
	$-A_1+$	$-D+$	$-A_1+$	$-D+$	$-A_1+$	$-D+$	$-A_1+$	$-D+$	$-A_1+$	$-D+$	$-A_1+$	$-D+$	
m	s	″	s	″	s	″	s	″	s	″	s	″	m
0		160.35	2.758	154.93	5.337	138.94	7.552	113.49	9.253	80.30	10.323	41.64	0
1	0.037	160.35	803	154.75	378	138.59	585	112.99	276	79.69	335	40.96	1
2	084	160.35	848	154.57	418	138.23	618	112.49	299	79.08	347	40.28	2
3	130	160.34	892	154.38	458	137.88	651	111.99	322	78.47	359	39.61	3
4	177	160.33	937	154.19	498	137.52	684	111.49	345	77.86	371	38.93	4
5	224	160.32	2.982	153.99	538	137.16	716	110.99	368	77.25	382	38.25	5
6	271	160.31	3.027	153.80	578	136.80	748	110.48	390	76.64	393	37.57	6
7	317	160.29	071	153.60	618	136.43	780	109.97	412	76.02	404	36.89	7
8	364	160.27	116	153.40	657	136.06	812	109.46	434	75.41	414	36.21	8
9	410	160.24	160	153.19	697	135.69	844	108.95	456	74.79	425	35.53	9
10	0.457	160.21	3.205	152.98	5.736	135.32	7.875	108.44	9.478	74.17	10.435	34.85	10
11	504	160.18	249	152.77	775	134.94	907	107.92	500	73.55	445	34.16	11
12	550	160.15	294	152.56	814	134.56	938	107.40	521	72.93	455	33.48	12
13	597	160.11	338	152.34	853	134.18	7.969	106.88	542	72.30	464	32.79	13
14	643	160.07	383	152.12	892	133.80	8.000	106.36	563	71.68	474	32.11	14
15	690	160.02	427	151.89	931	133.41	031	105.84	584	71.05	483	31.42	15
16	736	159.98	471	151.67	5.970	133.02	062	105.31	605	70.42	492	30.73	16
17	783	159.93	515	151.44	6.009	132.63	092	104.78	625	69.79	501	30.05	17
18	829	159.88	559	151.21	047	132.23	123	104.25	645	69.16	509	29.36	18
19	876	159.82	603	150.97	086	131.84	153	103.72	665	68.53	518	28.68	19
20	0.922	159.76	3.647	150.73	6.124	131.44	8.183	103.18	9.685	67.90	10.526	27.99	20
21	0.968	159.70	691	150.49	162	131.04	213	102.64	705	67.27	534	27.30	21
22	1.015	159.64	735	150.25	200	130.63	243	102.10	724	66.63	542	26.61	22
23	061	159.57	778	150.00	238	130.22	272	101.56	743	65.99	549	25.92	23
24	108	159.50	822	149.75	276	129.81	302	101.02	762	65.35	557	25.23	24
25	154	159.42	866	149.50	314	129.40	331	100.48	781	64.71	564	24.54	25
26	200	159.34	909	149.24	352	128.98	360	99.93	800	64.07	571	23.85	26
27	247	159.26	952	148.98	389	128.56	389	99.38	818	63.43	578	23.15	27
28	293	159.18	3.996	148.72	426	128.14	418	98.83	837	62.79	584	22.46	28
29	340	159.09	4.039	148.46	463	127.72	447	98.28	855	62.15	591	21.76	29
30	1.386	159.00	4.082	148.20	6.500	127.30	8.475	97.73	9.873	61.50	10.597	21.07	30
31	432	158.91	125	147.93	537	126.87	503	97.17	891	60.85	603	20.38	31
32	478	158.82	168	147.66	574	126.44	531	96.61	908	60.20	609	19.68	32
33	525	158.72	211	147.38	611	126.01	559	96.05	926	59.55	615	18.99	33
34	571	158.62	254	147.11	648	125.58	587	95.49	943	58.90	621	18.29	34
35	617	158.51	297	146.83	684	125.15	615	94.93	960	58.25	626	17.60	35
36	663	158.40	339	146.55	720	124.71	643	94.37	977	57.60	631	16.90	36
37	709	158.29	382	146.26	756	124.27	670	93.80	9.993	56.95	636	16.21	37
38	755	158.18	424	145.97	792	123.82	697	93.23	10.010	56.29	640	15.51	38
39	801	158.06	467	145.68	828	123.38	724	92.66	026	55.64	645	14.82	39
40	1.847	157.94	4.509	145.39	6.864	122.93	8.751	92.09	10.042	54.98	10.649	14.12	40
41	893	157.82	551	145.09	900	122.48	778	91.52	058	54.32	653	13.42	41
42	939	157.70	593	144.79	935	122.02	804	90.94	074	53.66	657	12.72	42
43	1.984	157.57	636	144.49	6.971	121.57	831	90.37	089	53.00	660	12.03	43
44	2.030	157.44	678	144.19	7.006	121.11	857	89.79	105	52.34	664	11.33	44
45	076	157.30	720	143.88	041	120.65	883	89.21	120	51.68	667	10.63	45
46	122	157.16	762	143.57	076	120.19	909	88.63	135	51.02	670	9.93	46
47	167	157.02	803	143.25	111	119.72	935	88.04	150	50.36	673	9.23	47
48	213	156.88	845	142.94	146	119.26	960	87.46	164	49.69	675	8.54	48
49	258	156.73	886	142.62	181	118.79	8.986	86.87	179	49.03	678	7.84	49
50	2.304	156.58	4.928	142.30	7.215	118.32	9.011	86.28	10.193	48.36	10.680	7.14	50
51	350	156.43	4.969	141.97	250	117.85	036	85.69	207	47.69	682	6.44	51
52	395	156.28	5.010	141.64	284	117.37	061	85.10	220	47.02	683	5.74	52
53	441	156.12	052	141.31	318	116.89	085	84.50	234	46.35	685	5.04	53
54	486	155.96	093	140.98	352	116.41	110	83.91	247	45.68	686	4.34	54
55	532	155.79	134	140.65	386	115.93	134	83.31	260	45.01	687	3.64	55
56	577	155.63	175	140.31	420	115.45	158	82.71	273	44.34	688	2.94	56
57	622	155.46	215	139.97	453	114.96	182	82.11	286	43.67	689	2.24	57
58	668	155.29	256	139.63	486	114.47	206	81.51	298	42.99	689	1.54	58
59	713	155.11	296	139.29	519	113.98	230	80.91	311	42.32	690	0.84	59
60	2.758	154.93	5.337	138.94	7.552	113.49	9.253	80.30	10.323	41.64	10.690	0.14	60

α	6h, 18h		7h, 19h		8h, 20h		9h, 21h		10h, 22h		11h, 23h		α
	−A₁+	+D−	−A₁+	+D−	−A₁+	+D−	−A₁+	+D−	−A₁+	+D−	−A₁+	+D−	
m	s	"	s	"	s	"	s	"	s	"	s	"	m
0	10.690		10.328	41.36	9.263	80.05	7.566	113.29	5.353	138.80	2.776	154.85	0
1	690	0.56	316	42.03	240	80.65	533	113.78	313	139.15	731	155.03	1
2	689	1.26	304	42.71	216	81.25	500	114.27	272	139.49	686	155.21	2
3	689	1.95	291	43.38	192	81.86	466	114.76	232	139.84	640	155.38	3
4	688	2.65	279	44.06	168	82.46	433	115.25	191	140.18	595	155.55	4
5	688	3.35	266	44.73	144	83.06	399	115.73	150	140.52	550	155.72	5
6	687	4.05	253	45.40	120	83.66	365	116.21	109	140.85	505	155.88	6
7	686	4.75	239	46.07	095	84.26	331	116.69	068	141.18	459	156.04	7
8	684	5.45	226	46.74	071	84.85	297	117.17	5.027	141.51	414	156.20	8
9	683	6.15	212	47.41	046	85.45	263	117.65	4.986	141.84	368	156.36	9
10	10.681	6.85	10.198	48.08	9.021	86.04	7.229	118.13	4.945	142.17	2.323	156.52	10
11	679	7.55	184	48.75	8.996	86.63	195	118.60	904	142.49	277	156.67	11
12	676	8.25	170	49.42	971	87.22	160	119.07	862	142.81	232	156.82	12
13	674	8.94	155	50.08	945	87.80	126	119.54	821	143.12	186	156.96	13
14	671	9.64	141	50.75	920	88.39	091	120.01	779	143.44	141	157.10	14
15	668	10.34	126	51.41	894	88.97	056	120.47	737	143.75	095	157.24	15
16	665	11.04	111	52.07	868	89.55	7.021	120.93	695	144.06	049	157.37	16
17	661	11.74	096	52.73	842	90.13	6.986	121.39	653	144.36	2.003	157.50	17
18	658	12.43	080	53.39	815	90.71	950	121.84	611	144.67	1.958	157.63	18
19	654	13.13	065	54.05	789	91.29	915	122.30	569	144.97	912	157.76	19
20	10.650	13.83	10.049	54.71	8.762	91.86	6.879	122.75	4.527	145.27	1.866	157.89	20
21	646	14.53	033	55.37	735	92.43	843	123.20	485	145.56	820	158.01	21
22	642	15.22	017	56.02	708	93.00	807	123.64	442	145.85	774	158.13	22
23	637	15.92	10.000	56.68	681	93.57	771	124.09	400	146.14	728	158.24	23
24	633	16.61	9.984	57.33	654	94.14	735	124.53	357	146.43	682	158.35	24
25	628	17.31	967	57.98	627	94.70	699	124.97	314	146.71	636	158.46	25
26	623	18.01	950	58.63	599	95.26	663	125.41	272	146.99	590	158.56	26
27	617	18.70	933	59.28	571	95.82	626	125.84	229	147.27	544	158.66	27
28	612	19.40	915	59.93	543	96.38	589	126.27	186	147.54	497	158.76	28
29	606	20.09	898	60.58	515	96.94	552	126.70	143	147.82	451	158.86	29
30	10.600	20.79	9.880	61.23	8 487	97.50	6.515	127.13	4.100	148.09	1.405	158.96	30
31	594	21.48	862	61.88	459	98.06	478	127.55	057	148.36	359	159.05	31
32	587	22.17	844	62.52	430	98.61	441	127.97	4.013	148.62	312	159.14	32
33	581	22.87	826	63.17	401	99.16	404	128.39	3.970	148.88	266	159.22	33
34	574	23.56	808	63.81	372	99.71	367	128.81	926	149.14	219	159.30	34
35	567	24.25	789	64.45	343	100.26	329	129.23	883	149.40	173	159.38	35
36	560	24.94	770	65.09	314	100.80	291	129.64	840	149.65	127	159.45	36
37	552	25.63	751	65.73	284	101.34	253	130.05	796	149.90	080	159.52	37
38	545	26.32	732	66.37	255	101.88	215	130.46	753	150.14	1.034	159.59	38
39	537	27.01	713	67.01	225	102.42	177	130.87	709	150.39	0.987	159.66	39
40	10.529	27.70	9.693	67.64	8.195	102.96	6.139	131.27	3.665	150.63	0.941	159.73	40
41	521	28.39	673	68.27	165	103.50	101	131.67	621	150.87	895	159.79	41
42	513	29.08	653	68.90	135	104.03	063	132.07	577	151.10	848	159.85	42
43	504	29.76	633	69.53	105	104.56	6.024	132.46	533	151.34	802	159.90	43
44	496	30.45	613	70.16	075	105.09	5.986	132.86	489	151.57	755	159.95	44
45	487	31.14	592	70.79	044	105.62	947	133.25	445	151.80	709	160.00	45
46	478	31.83	571	71.42	8.013	106.15	908	133.64	401	152.03	662	160.05	46
47	468	32.51	550	72.04	7.982	106.67	869	134.02	357	152.25	616	160.09	47
48	459	33.20	529	72.67	951	107.19	830	134.40	313	152.47	569	160.13	48
49	449	33.88	508	73.29	920	107.71	791	134.78	269	152.68	523	160.16	49
50	10.439	34.57	9.487	73.91	7.888	108.23	5.752	135.16	3.224	152.89	0.476	160.19	50
51	429	35.25	465	74.53	857	108.74	713	135.53	180	153.10	429	160.22	51
52	418	35.93	443	75.15	825	109.25	673	135.90	135	153.31	383	160.25	52
53	408	36.61	421	75.76	793	109.76	634	136.27	091	153.51	336	160.27	53
54	397	37.29	399	76.38	761	110.27	594	136.64	046	153.71	290	160.29	54
55	386	37.97	377	77.00	729	110.78	554	137.01	3.001	153.91	243	160.31	55
56	375	38.65	355	77.61	697	111.29	514	137.37	2.956	154.11	196	160.33	56
57	363	39.33	332	78.22	664	111.79	474	137.73	911	154.30	150	160.34	57
58	352	40.00	309	78.83	632	112.29	434	138.09	866	154.49	103	160.35	58
59	340	40.68	286	79.44	599	112.79	394	138.45	821	154.67	057	160.35	59
60	10.328	41.36	9.263	80.05	7.566	113.29	5.353	138.80	2.776	154.85	0.010	160.35	60

Reduktionsgrößen 1933

Übertragung von Sternörtern vom mittleren Äquinoktium 1933.0 auf das Normaläquinoktium 1925.0

α	A	A_2	D_1	α	α	A	A_2	D_1	α
h m	s	s	"	h m	h m	s	s	"	h m
0 0	−24.583	+0.0000	−0.000	12 0	6 0	−24.583	−0.0000	−0.062	18 0
10	583	04	0	10	10	583	04	62	10
20	583	07	0	20	20	583	07	62	20
30	582	11	1	30	30	584	11	61	30
40	582	14	2	40	40	584	14	60	40
50	582	18	3	50	50	584	18	59	50
1 0	−24.582	+0.0021	−0.004	13 0	7 0	−24.584	−0.0021	−0.058	19 0
10	582	24	6	10	10	584	24	57	10
20	582	27	7	20	20	584	27	55	20
30	582	29	9	30	30	584	29	53	30
40	581	32	11	40	40	585	32	51	40
50	581	34	13	50	50	585	34	49	50
2 0	−24.581	+0.0036	−0.016	14 0	8 0	−24.585	−0.0036	−0.047	20 0
10	581	38	18	10	10	585	38	44	10
20	581	39	21	20	20	585	39	42	20
30	581	40	23	30	30	585	40	39	30
40	581	41	26	40	40	585	41	37	40
50	581	41	28	50	50	585	41	34	50
3 0	−24.581	+0.0042	−0.031	15 0	9 0	−24.585	−0.0042	−0.031	21 0
10	581	41	34	10	10	585	41	28	10
20	581	41	37	20	20	585	41	26	20
30	581	40	39	30	30	585	40	23	30
40	581	39	42	40	40	585	39	21	40
50	581	38	44	50	50	585	38	18	50
4 0	−24.581	+0.0036	−0.047	16 0	10 0	−24.585	−0.0036	−0.016	22 0
10	581	34	49	10	10	585	34	13	10
20	581	32	51	20	20	585	32	11	20
30	582	29	53	30	30	584	29	9	30
40	582	27	55	40	40	584	27	7	40
50	582	24	57	50	50	584	24	6	50
5 0	−24.582	+0.0021	−0.058	17 0	11 0	−24.584	−0.0021	−0.004	23 0
10	582	18	59	10	10	584	18	3	10
20	582	14	60	20	20	584	14	2	20
30	582	11	61	30	30	584	11	1	30
40	583	07	62	40	40	583	07	0	40
50	583	04	62	50	50	583	04	0	50
6 0	−24.583	+0.0000	−0.062	18 0	12 0	−24.583	−0.0000	−0.000	24 0

$$\alpha_{1925} = \alpha_{1933} + A + A_1 \operatorname{tg} \delta_{1933} + A_2 \operatorname{tg}^2 \delta_{1933}$$
$$\delta_{1925} = \delta_{1933} + D + D_1 \operatorname{tg} \delta_{1933}$$

A_1 und D sind aus der Tafel (S. 274*/275*) mit dem Argument α_{1933} zu entnehmen; für die Werte von α zwischen 0^h und 12^h gelten die Vorzeichen zur Linken, für die Werte von α zwischen 12^h und 24^h die Vorzeichen zur Rechten.

Finsternisse, Sternbedeckungen, Mösting A, Trabanten

Konstellationen, Hilfstafeln

1933

Sonnenfinsternisse 1933

Im Jahre 1933 finden zwei Sonnenfinsternisse statt.
Der Mond wird nicht verfinstert.

I. Ringförmige Sonnenfinsternis 1933 Februar 24 unsichtbar in Berlin.

Konjunktion in Rektaszension . . Februar 24, 12h 33m 43.3s Welt-Zeit

	h m s
Rektaszension des Mondes	22 29 7.40
Stündliche Änderung	2 1.48
Rektaszension der Sonne	22 29 7.40
Stündliche Änderung	9.49
	° ′ ″
Deklination des Mondes	−9 44 45.6
Stündliche Änderung	+ 15 7.6
Deklination der Sonne	−9 30 38.3
Stündliche Änderung	+ 0 55.4
	′ ″
Äquatorialhorizontalparallaxe des Mondes . .	57 27.1
,, der Sonne . .	8.9
	′ ″
Halbmesser des Mondes	15 38.5
,, der Sonne	16 9.4

	Welt-Zeit	Westl. Länge von Greenwich	Geogr. Breite
	h m	° ′	° ′
Beginn der Finsternis	Febr. 24, 9 55.8	62 21	−34 56
Beginn der zentralen Finsternis	,, 10 58.3	79 9	−39 25
Zentrale Finsternis im wahren Mittag	,, 12 33.7	5 5	−23 56
Ende der zentralen Finsternis .	,, 14 34.3	307 42	+14 28
Ende der Finsternis	,, 15 36.8	324 9	+19 0

Verlauf der Zentrallinie

Welt-Zeit	Westl. Länge von Greenwich	Geogr. Breite	Dauer der ringf. Verfinst.	Welt-Zeit	Westl. Länge von Greenwich	Geogr. Breite	Dauer der ringf. Verfinst.
h m	° ′	° ′	m s	h m	° ′	° ′	m s
10 58.3	79 9	−39 25	—	13 0	358 53.7	−17 19.0	1 32.0
11 0	66 36.9	−41 3.2	1 51.6	13 20	354 20.4	−12 3.3	1 34.1
11 20	37 11.6	−40 3.9	1 44.1	13 40	349 17.5	− 6 30.7	1 37.7
11 40	23 58.0	−36 19.7	1 39.1	14 0	342 50.3	− 0 31.6	1 43.0
12 0	15 14.0	−31 56.7	1 35.3	14 20	332 33.6	+ 6 21.4	1 50.1
12 20	8 45.8	−27 15.5	1 32.7	14 34.3	307 42	+14 28	—
12 40	3 31.9	−22 22.6	1 31.6				

Die Finsternis ist sichtbar in der südlichen Hälfte von Südamerika, im südlichen Atlantischen Ozean, in Afrika mit Ausnahme des nordwestlichen Teiles, in Griechenland, Kleinasien, im Kaukasus, in Arabien und Persien und im westlichen Teil des Indischen Ozeans.

Elemente der ringförmigen Sonnenfinsternis 1933, Februar 24

Welt-Zeit	x	y	log sin d	log cos d	μ	$l^{(a)}$	$l^{(i)}$
h m					° ′		
9 50	−1.31422	−0.92200	9.21988_n	9.99394	324 8.7	+0.55451	+0.00855
10 0	−1.23394	−0.88077	9.21977_n	9.99394	326 38.8	+0.55454	+0.00858
10	1.15367	0.83953	9.21966_n	9.99395	329 8.8	0.55457	0.00861
20	1.07339	0.79829	9.21955_n	9.99395	331 38.8	0.55460	0.00864
30	0.99312	0.75705	9.21944_n	9.99395	334 8.8	0.55463	0.00867
40	0.91284	0.71580	9.21933_n	9.99396	336 38.9	0.55466	0.00870
50	0.83257	0.67454	9.21922_n	9.99396	339 8.9	0.55468	0.00872
11 0	−0.75229	−0.63329	9.21911_n	9.99396	341 38.9	+0.55471	+0.00875
10	0.67202	0.59203	9.21900_n	9.99396	344 9.0	0.55474	0.00878
20	0.59174	0.55076	9.21888_n	9.99397	346 39.0	0.55476	0.00880
30	0.51147	0.50949	9.21877_n	9.99397	349 9.0	0.55479	0.00883
40	0.43120	0.46822	9.21866_n	9.99397	351 39.0	0.55481	0.00885
50	0.35093	0.42694	9.21855_n	9.99398	354 9.1	0.55484	0.00887
12 0	−0.27066	−0.38566	9.21844_n	9.99398	356 39.1	+0.55486	+0.00890
10	0.19039	0.34438	9.21833_n	9.99398	359 9.1	0.55488	0.00892
20	0.11013	0.30309	9.21822_n	9.99398	1 39.2	0.55490	0.00894
30	−0.02987	0.26180	9.21810_n	9.99399	4 9.2	0.55492	0.00896
40	+0.05039	0.22051	9.21799_n	9.99399	6 39.2	0.55494	0.00898
50	0.13065	0.17921	9.21788_n	9.99400	9 9.2	0.55496	0.00900
13 0	+0.21090	−0.13791	9.21777_n	9.99400	11 39.3	+0.55498	+0.00902
10	0.29115	0.09661	9.21766_n	9.99400	14 9.3	0.55500	0.00904
20	0.37140	0.05530	9.21755_n	9.99400	16 39.3	0.55502	0.00906
30	0.45164	−0.01400	9.21744_n	9.99401	19 9.3	0.55504	0.00907
40	0.53188	+0.02731	9.21732_n	9.99401	21 39.4	0.55505	0.00909
50	0.61212	0.06863	9.21721_n	9.99401	24 9.4	0.55507	0.00911
14 0	+0.69235	+0.10994	9.21710_n	9.99402	26 39.4	+0.55508	+0.00912
10	0.77258	0.15126	9.21699_n	9.99402	29 9.5	0.55510	0.00914
20	0.85280	0.19258	9.21688_n	9.99402	31 39.5	0.55511	0.00915
30	0.93302	0.23390	9.21677_n	9.99403	34 9.5	0.55513	0.00916
40	1.01324	0.27523	9.21665_n	9.99403	36 39.5	0.55514	0.00918
50	1.09345	0.31656	9.21654_n	9.99403	39 9.6	0.55515	0.00919
15 0	+1.17365	+0.35788	9.21643_n	9.99404	41 39.6	+0.55516	+0.00920
10	1.25385	0.39921	9.21632_n	9.99404	44 9.6	0.55517	0.00921
20	1.33404	0.44054	9.21621_n	9.99404	46 39.6	0.55518	0.00922
30	1.41423	0.48188	9.21609_n	9.99404	49 9.7	0.55519	0.00923
40	+1.49441	+0.52321	9.21598_n	9.99405	51 39.7	+0.55520	+0.00924

Welt-Zeit	x'	y'	log tang $f^{(a)}$	log tang $f^{(i)}$
h m				
9 0	+0.008026	+0.004120	7.67428	7.67212
10 0	0.008027	0.004123	7.67428	7.67211
11 0	0.008028	0.004126	7.67428	7.67211
12 0	0.008027	0.004128	7.67427	7.67210
13 0	0.008025	0.004130	7.67427	7.67210
14 0	0.008023	0.004131	7.67427	7.67210
15 0	0.008020	0.004132	7.67426	7.67209
16 0	+0.008017	+0.004133	7.67426	7.67209

II. Ringförmige Sonnenfinsternis 1933 August 21 sichtbar in Berlin als partielle Finsternis.

Konjunktion in Rektaszension . . . August 21, $5^h\ 43^m\ 57^s.8$ Welt-Zeit

Rektaszension des Mondes	$9^h\ 59^m\ 34^s.21$
Stündliche Änderung	1 57.86
Rektaszension der Sonne	9 59 34.21
Stündliche Änderung	9.26
Deklination des Mondes	$+12°\ 21'\ 55''.6$
Stündliche Änderung	−13 40.6
Deklination der Sonne	+12 16 33.1
Stündliche Änderung	− 0 49.8
Äquatorialhorizontalparallaxe des Mondes . .	$55'\ 59''.8$
,, der Sonne . .	8.7
Halbmesser des Mondes	$15'\ 14''.8$
,, der Sonne	15 48.7

	Welt-Zeit (^{h} ^{m})	Westl. Länge von Greenwich (° ′)	Geogr. Breite (° ′)
Beginn der Finsternis	August 21, 2 52.1	319 0	+28 26
Beginn der zentralen Finsternis	,, 3 55.5	335 22	+30 11
Zentrale Finsternis im wahren Mittag	,, 5 44.0	265 12	+17 55
Ende der zentralen Finsternis .	,, 7 42.0	209 22	−20 31
Ende der Finsternis	,, 8 45.3	225 39	−22 16

Verlauf der Zentrallinie

Welt-Zeit (h m)	Westl. Länge von Greenwich (° ′)	Geogr. Breite (° ′)	Dauer der ringf. Verfinst. (m s)	Welt-Zeit (h m)	Westl. Länge von Greenwich (° ′)	Geogr. Breite (° ′)	Dauer der ringf. Verfinst. (m s)
3 55.5	335 22	+30 11	—	6 0	261 41.1	+14 15.2	2 2.6
4 0	317 52.9	+33 2.6	2 18.2	6 20	257 24.5	+ 9 24.7	2 1.7
4 20	296 26.6	+32 53.7	2 16.6	6 40	252 48.6	+ 4 11.9	2 2.0
4 40	285 4.4	+30 19.4	2 13.9	7 0	247 12.2	− 1 31.9	2 3.5
5 0	277 9.3	+26 54.8	2 10.7	7 20	239 4.1	− 8 8.7	2 6.3
5 20	271 5.5	+23 1.4	2 7.4	7 40	219 45.8	−17 40.3	2 11.4
5 40	266 6.3	+18 47.3	2 4.6	7 42.0	209 22	−20 31	—

Die Finsternis ist sichtbar in Mittel- und Osteuropa, im nordöstlichen Teil von Afrika, in Asien mit Ausnahme des nordöstlichen Teils, im nördlichen Indischen Ozean, auf den Sunda-Inseln, in Australien und im südwestlichen Stillen Ozean.

Elemente der ringförmigen Sonnenfinsternis 1933, August 21

Welt-Zeit	x	y	log sin d	log cos d	μ	$l^{(a)}$	$l^{(i)}$
h m					° ′		
2 50	−1.37673	+0.76253	9.32893	9.98989	221 41.8	+0.55631	+0.01035
3 0	−1.29760	+0.72427	9.32886	9.98990	224 11.8	+0.55631	+0.01034
10	1.21847	0.68601	9.32878	9.98990	226 41.8	0.55630	0.01033
20	1.13933	0.64774	9.32870	9.98990	229 11.9	0.55629	0.01032
30	1.06020	0.60947	9.32862	9.98991	231 41.9	0.55628	0.01031
40	0.98106	0.57119	9.32855	9.98991	234 12.0	0.55627	0.01030
50	0.90192	0.53291	9.32847	9.98991	236 42.0	0.55626	0.01029
4 0	−0.82279	+0.49462	9.32839	9.98992	239 12.0	+0.55625	+0.01028
10	0.74365	0.45632	9.32832	9.98992	241 42.1	0.55624	0.01027
20	0.66451	0.41802	9.32824	9.98992	244 12.1	0.55623	0.01026
30	0.58536	0.37972	9.32816	9.98993	246 42.1	0.55621	0.01024
40	0.50622	0.34141	9.32809	9.98993	249 12.2	0.55620	0.01023
50	0.42708	0.30309	9.32801	9.98994	251 42.2	0.55619	0.01022
5 0	−0.34794	+0.26477	9.32793	9.98994	254 12.2	+0.55617	+0.01020
10	0.26880	0.22644	9.32786	9.98994	256 42.3	0.55616	0.01019
20	0.18965	0.18811	9.32778	9.98995	259 12.3	0.55614	0.01017
30	0.11051	0.14978	9.32770	9.98995	261 42.4	0.55612	0.01016
40	−0.03137	0.11144	9.32762	9.98995	264 12.4	0.55611	0.01014
50	+0.04777	0.07309	9.32755	9.98996	266 42.4	0.55609	0.01012
6 0	+0.12691	+0.03474	9.32747	9.98996	269 12.5	+0.55607	+0.01010
10	0.20605	−0.00361	9.32739	9.98996	271 42.5	0.55605	0.01009
20	0.28519	0.04197	9.32732	9.98997	274 12.5	0.55603	0.01007
30	0.36433	0.08033	9.32724	9.98997	276 42.6	0.55601	0.01005
40	0.44346	0.11869	9.32716	9.98998	279 12.6	0.55599	0.01003
50	0.52259	0.15706	9.32708	9.98998	281 42.6	0.55597	0.01001
7 0	+0.60172	−0.19543	9.32701	9.98998	284 12.7	+0.55595	+0.00998
10	0.68085	0.23381	9.32693	9.98999	286 42.7	0.55593	0.00996
20	0.75998	0.27219	9.32685	9.98999	289 12.8	0.55591	0.00994
30	0.83910	0.31057	9.32678	9.98999	291 42.8	0.55588	0.00992
40	0.91822	0.34896	9.32670	9.99000	294 12.8	0.55586	0.00989
50	0.99734	0.38735	9.32662	9.99000	296 42.9	0.55583	0.00987
8 0	+1.07645	−0.42574	9.32654	9.99000	299 12.9	+0.55581	+0.00984
10	1.15556	0.46413	9.32647	9.99001	301 42.9	0.55578	0.00982
20	1.23467	0.50253	9.32639	9.99001	304 13.0	0.55576	0.00979
30	1.31377	0.54093	9.32631	9.99002	306 43.0	0.55573	0.00976
40	1.39287	0.57933	9.32624	9.99002	309 13.0	0.55570	0.00974
50	+1.47197	−0.61773	9.32616	9.99002	311 43.1	+0.55568	+0.00971

Welt-Zeit	x'	y'	log tang $f^{(a)}$	log tang $f^{(i)}$
h m				
2 0	+0.007911	−0.003823	7.66491	7.66274
3 0	0.007913	0.003826	7.66491	7.66275
4 0	0.007913	0.003829	7.66492	7.66275
5 0	0.007914	0.003832	7.66492	7.66275
6 0	0.007914	0.003835	7.66492	7.66276
7 0	0.007913	0.003837	7.66493	7.66276
8 0	0.007911	0.003839	7.66493	7.66276
9 0	+0.007909	−0.003841	7.66493	7.66277

Sonnenfinsternisse 1933

Sonnenfinsternis 1933 August 21

Geographische Breite	Anfang der Finsternis									Größte Phase					Geographische Breite
	Östliche Länge von Greenwich									Östl. Länge von Greenwich					
	20m	30m	40m	50m	60m	70m	80m	90m	100m	20m	30m	40m	50m	60m	
	Welt-Zeit									Welt-Zeit					
			3h	3h	3h	3h	3h	3h	3h	4h	4h	4h	4h	4h	
° 44	·	·	·	·	·	·	·	·	·	·	·	·	·	·	44
45	·	·	·	·	·	·	·	·	·	·	·	·	·	· m	45
46	·	·	·	·	·	·	·	·	·	·	·	·	·	6.3	46
47	·	·	·	·	·	·	·	·	·	·	·	·	·	7.1	47
48	·	·	·	·	·	·	·	·	·	·	·	·	· m	7.9	48
49	·	·	·	·	·	·	·	·	· m	·	·	·	9.4	8.7	49
50	·	·	·	·	·	·	·	·	17.5	·	·	·	10.2	9.5	50
51	·	·	·	·	·	·	·	· m	19.5	·	·	· m	11.0	10.4	51
52	·	·	·	·	·	·	·	22.7	21.5	·	·	12.6	11.9	11.3	52
53	·	·	·	·	·	·	· m	24.8	23.6	·	·	13.4	12.7	12.2	53
54	·	·	·	·	·	·	28.4	27.1	25.9	·	· m	14.3	13.6	13.1	54
55	·	·	·	·	·	· m	30.8	29.5	28.4	·	16.0	15.2	14.6	14.1	55
56	·	·	·	·	· m	34.8	33.3	32.0	30.9	· m	16.9	16.2	15.6	15.1	56
57	·	·	·	· m	39.1	37.4	35.9	34.7	33.6	18.6	17.8	17.2	16.6	16.1	57
58	·	·	·	43.6	41.9	40.3	38.8	37.5	36.4	19.6	18.8	18.2	17.6	17.1	58
59	·	·	· m	46.6	44.9	43.3	41.8	40.5	39.4	20.5	19.8	19.2	18.6	18.1	59
60	·	·	51.8	49.9	48.1	46.5	45.0	43.7	42.5	21.5	20.8	20.2	19.6	19.2	60

Geographische Breite	Winkel P									Betrag der größten Phase					Geographische Breite
	20m	30m	40m	50m	60m	70m	80m	90m	100m	20m	30m	40m	50m	60m	
° 44	·	·	·	·	·	·	·	·	·	·	·	·	·	·	44
46	·	·	·	·	·	·	·	·	·	·	·	·	·	0.48	46
48	·	·	·	·	·	·	·	·	· °	·	·	·	·	0.43	48
50	·	·	·	·	·	·	·	· °	256.9	·	·	·	0.36	0.38	50
52	·	·	·	·	·	·	· °	252.4	253.4	·	·	0.30	0.31	0.33	52
54	·	·	·	·	·	· °	247.6	248.7	249.7	·	·	0.26	0.27	0.28	54
56	·	·	·	· °	· °	242.7	243.8	244.9	245.9	·	0.19	0.21	0.22	0.23	56
58	·	·	· °	236.0	237.3	238.5	239.7	240.8	241.8	0.14	0.15	0.16	0.17	0.19	58
60	·	·	229.9	231.4	232.7	234.0	235.2	236.3	237.4	0.10	0.11	0.12	0.13	0.14	60

Geographische Breite	Winkel Q														Geographische Breite
	20m	30m	40m	50m	60m	70m	80m	90m	100m	20m	30m	40m	50m	60m	
° 44	·	·	·	·	·	·	·	·	·	·	·	·	·	·	44
46	·	·	·	·	·	·	·	·	·	·	·	·	·	·	46
48	·	·	·	·	·	·	·	·	· °	·	·	·	·	·	48
50	·	·	·	·	·	·	·	· °	295.1	·	·	·	·	·	50
52	·	·	·	·	·	·	· °	288.5	289.9	·	·	·	·	·	52
54	·	·	·	·	·	· °	281.7	283.2	284.6	·	·	·	·	·	54
56	·	·	·	· °	· °	274.7	276.2	277.7	279.1	·	·	·	·	·	56
58	·	·	· °	265.6	267.3	268.9	270.5	272.0	273.3	·	·	·	·	·	58
60	·	·	257.5	259.4	261.2	262.8	264.4	265.9	267.2	·	·	·	·	·	60

Sonnenfinsternis 1933 August 21

Geographische Breite	Größte Phase					Ende der Finsternis									Geographische Breite
	Östl. Länge von Greenwich					Östliche Länge von Greenwich									
	60^m	70^m	80^m	90^m	100^m	20^m	30^m	40^m	50^m	60^m	70^m	80^m	90^m	100^m	
	Welt-Zeit					Welt-Zeit									
	4^h	4^h	4^h	4^h	4^h	4^h	4^h	4^h	4^h	4^h	4^h	4^h	4^h	4^h	
°		m	m	m	m	m	m	m	m	m	m	m	m	m	°
44	·	4.3	3.8	3.5	3.2	58.5	58.7	59.0	59.4	59.9	60.6	61.4	62.4	63.4	44
45	· m	5.0	4.5	4.2	3.9	58.3	58.5	58.8	59.2	59.8	60.5	61.3	62.3	63.3	45
46	6.3	5.7	5.3	5.0	4.7	58.0	58.3	58.6	59.0	59.6	60.3	61.1	62.1	63.1	46
47	7.1	6.5	6.1	5.8	5.5	57.7	58.0	58.3	58.8	59.4	60.1	60.9	61.9	62.9	47
48	7.9	7.3	6.9	6.6	6.4	57.3	57.6	58.0	58.5	59.1	59.9	60.7	61.6	62.6	48
49	8.7	8.1	7.7	7.4	7.2	56.9	57.3	57.7	58.2	58.8	59.6	60.4	61.3	62.3	49
50	9.5	9.0	8.6	8.3	8.1	56.5	56.9	57.3	57.8	58.5	59.3	60.1	61.0	62.0	50
51	10.4	9.9	9.5	9.2	9.0	56.0	56.4	56.9	57.4	58.1	58.9	59.7	60.6	61.6	51
52	11.3	10.8	10.4	10.1	9.9	55.4	55.9	56.4	57.0	57.7	58.5	59.3	60.2	61.2	52
53	12.2	11.7	11.3	11.1	10.9	54.7	55.2	55.8	56.4	57.2	58.0	58.8	59.7	60.7	53
54	13.1	12.6	12.3	12.1	11.9	54.0	54.6	55.2	55.8	56.6	57.4	58.3	59.2	60.2	54
55	14.1	13.6	13.3	13.1	12.9	53.2	53.8	54.5	55.1	55.9	56.7	57.6	58.6	59.6	55
56	15.1	14.6	14.3	14.1	13.9	52.3	53.0	53.7	54.4	55.2	56.0	56.9	57.9	58.9	56
57	16.1	15.6	15.3	15.1	14.9	51.2	51.9	52.7	53.5	54.3	55.2	56.1	57.1	58.1	57
58	17.1	16.7	16.4	16.2	16.0	50.1	50.9	51.7	52.6	53.4	54.3	55.2	56.2	57.2	58
59	18.1	17.7	17.4	17.2	17.1	48.8	49.6	50.5	51.4	52.4	53.3	54.2	55.1	56.1	59
60	19.2	18.8	18.5	18.3	18.2	47.2	48.1	49.1	50.1	51.1	52.1	53.1	54.1	55.0	60

Geographische Breite	Betrag der größten Phase					Winkel P									Geographische Breite
°						°	°	°	°	°	°	°	°	°	°
44	·	0.54	0.56	0.57	0.59	141.4	140.4	139.5	138.7	137.9	137.2	136.6	136.1	135.6	44
46	0.48	0.49	0.51	0.52	0.54	145.0	144.1	143.2	142.4	141.6	140.9	140.3	139.8	139.3	46
48	0.43	0.44	0.46	0.47	0.48	148.8	147.9	147.0	146.2	145.4	144.7	144.1	143.6	143.1	48
50	0.38	0.39	0.40	0.41	0.43	152.7	151.8	150.9	150.0	149.2	148.5	147.9	147.4	146.9	50
52	0.33	0.34	0.35	0.36	0.38	156.8	155.8	154.9	154.0	153.2	152.5	151.9	151.3	150.8	52
54	0.28	0.29	0.30	0.31	0.32	161.1	160.1	159.1	158.2	157.3	156.6	156.0	155.4	154.9	54
56	0.23	0.24	0.25	0.26	0.27	165.6	164.5	163.5	162.6	161.7	161.0	160.3	159.7	159.2	56
58	0.19	0.20	0.21	0.22	0.22	170.6	169.4	168.3	167.3	166.4	165.6	164.9	164.3	163.8	58
60	0.14	0.15	0.16	0.17	0.18	176.2	174.9	173.6	172.6	171.5	170.6	169.8	169.2	168.6	60

Geographische Breite						Winkel Q									Geographische Breite
°						°	°	°	°	°	°	°	°	°	°
44	·	·	·	·	·	186.5	186.0	185.6	185.1	184.7	184.3	183.9	183.5	183.2	44
46	·	·	·	·	·	188.2	187.7	187.3	186.8	186.4	186.0	185.6	185.2	184.8	46
48	·	·	·	·	·	190.0	189.5	189.1	188.6	188.1	187.7	187.3	186.9	186.5	48
50	·	·	·	·	·	192.0	191.4	190.9	190.4	190.0	189.5	189.1	188.6	188.2	50
52	·	·	·	·	·	194.1	193.5	192.9	192.4	191.9	191.4	191.0	190.5	190.1	52
54	·	·	·	·	·	196.3	195.7	195.1	194.5	194.0	193.5	193.0	192.5	192.1	54
56	·	·	·	·	·	198.9	198.2	197.6	197.0	196.4	195.8	195.3	194.8	194.3	56
58	·	·	·	·	·	201.9	201.1	200.4	199.7	199.0	198.4	197.8	197.3	196.8	58
60	·	·	·	·	·	205.4	204.5	203.6	202.8	202.0	201.3	200.7	200.1	199.6	60

Sternbedeckungen 1933

Elemente der in Mitteleuropa sichtbaren Sternbedeckungen

Stern: Name	Gr.	δ app.	Konjunktion in Rektaszension: Welt-Zeit	Stundenw. H	Y	x′	y′	Grenzen der Sichtbarkeit in geogr. Br.		Alter d. Mondes
Januar										
	m	° ′	d h m	h m				°	°	d
δ Piscium	4.5	+ 7 13.3	3 17 37.7	−0 16.0	+0.8065	0.4912	+0.2528	+90	− 1	7.2
47 Arietis	5.8	+20 24.3	6 13 56.4	−5 55.1	+1.3084	0.5166	+0.1751	+78	+50	10.1
ε Arietis (med.)	4.6	+21 4.6	6 14 30.2	−5 22.4	+0.6614	0.5170	+0.1742	+90	+ 1	10.1
η Tauri	2.9	+23 54.2	7 13 52.9	−6 43.9	+1.1078	0.5308	+0.1307	+90	+35	11.1
27 Tauri	3.7	+23 51.2	7 14 40.6	−5 57.8	+1.2656	0.5313	+0.1291	+80	+51	11.1
28 Tauri	5.2	+23 56.2	7 14 41.2	−5 57.2	+1.1743	0.5313	+0.1291	+90	+41	11.1
406 B. Tauri	5.6	+27 57.1	9 21 30.3	−1 0.7	+0.3410	0.5542	−0.0026	+66	+ 3	13.4
136 Tauri	4.6	+27 36.0	9 22 32.4	−0 0.7	+0.7233	0.5543	−0.0053	+90	+22	13.4
A Geminorum	5.1	+25 10.9	11 13 59.9	−9 57.1	+1.1074	0.5512	−0.1072	+90	+38	15.1
181 B. Geminorum	6.0	+24 22.6	11 20 59.6	−3 11.9	+1.1699	0.5490	−0.1240	+90	+41	15.4
ϰ Geminorum	3.6	+24 33.6	11 23 20.2	−0 56.2	+0.6721	0.5482	−0.1295	+90	+ 8	15.5
ψ Leonis	5.6	+14 19.7	14 7 12.6	+5 5.8	+1.2325	0.5236	−0.2328	+90	+33	17.8
α Leonis	1.3	+12 17.6	14 19 23.8	−7 5.8	+0.4551	0.5190	−0.2475	+72	−17	18.3
45 Leonis	5.8	+10 6.2	15 5 2.5	+2 15.1	+0.3328	0.5161	−0.2569	+64	−24	18.7
ρ Leonis	3.8	+ 9 39.0	15 7 38.4	+4 46.3	+0.1387	0.5155	−0.2592	+52	−35	18.8
χ Virginis	4.8	− 7 37.7	17 23 21.6	−5 26.5	+0.7608	0.5210	−0.2717	+83	− 6	21.5
ψ Virginis	5.0	− 9 10.6	18 6 42.1	+1 40.2	+0.3703	0.5246	−0.2676	+63	−26	21.8
83 Virginis	5.6	−15 50.7	19 6 12.6	+0 24.5	+1.1203	0.5401	−0.2457	+75	+19	22.8
τ Scorpii	2.8	−28 4.8	22 4 3.4	−4 24.0	+0.9520	0.5988	−0.0890	+62	+12	25.7
135 B. Scorpii	6.0	−28 23.3	22 7 26.0	−1 10.0	+0.9775	0.6006	−0.0781	+62	+14	25.8
Februar										
	m	° ′	d h m	h m				°	°	d
ε Arietis (med.)	4.6	+21 4.6	2 22 23.4	+4 18.6	+0.8619	0.5172	+0.1736	+90	+12	7.9
7 Tauri	5.9	+24 14.7	3 15 30.2	−3 6.9	+0.0648	0.5262	+0.1420	+49	−25	8.6
16 Tauri	5.4	+24 5.0	3 20 26.2	+1 39.6	+0.9197	0.5288	+0.1321	+90	+22	8.9
17 Tauri	3.8	+23 54.4	3 20 28.4	+1 41.8	+1.1194	0.5289	+0.1321	+90	+36	8.9
18 Tauri	5.6	+24 38.0	3 20 36.0	+1 49.1	+0.3316	0.5289	+0.1318	+64	−11	8.9
q Tauri	4.3	+24 15.7	3 20 37.6	+1 50.6	+0.7469	0.5289	+0.1317	+90	+11	8.9
20 Tauri	4.1	+24 9.8	3 20 55.3	+2 7.7	+0.8950	0.5291	+0.1311	+90	+20	8.9
21 Tauri	5.8	+24 21.0	3 20 57.4	+2 9.8	+0.6927	0.5291	+0.1311	+90	+ 8	8.9
η Tauri	2.9	+23 54.2	3 21 42.5	+2 53.4	+1.2861	0.5295	+0.1295	+75	+54	8.9
A Geminorum	5.1	+25 10.9	7 21 56.5	−0 12.7	+1.1634	0.5509	−0.1086	+90	+43	12.9
181 B. Geminorum	6.0	+24 22.6	8 4 54.7	+6 30.9	+1.2154	0.5492	−0.1255	+87	+46	13.2
ν Leonis	5.0	+12 45.8	10 21 32.4	−3 0.2	+1.1412	0.5258	−0.2454	+90	+24	15.9
α Leonis	1.3	+12 17.6	11 2 29.8	+1 47.8	+0.4018	0.5242	−0.2513	+68	−21	16.1
χ Virginis	4.8	− 7 37.8	14 5 4.8	+2 4.0	+0.6353	0.5254	−0.2745	+83	−12	19.2
März										
	m	° ′	d h m	h m				°	°	d
μ Arietis	5.7	+19 43.8	1 22 24.2	+6 22.6	+0.8899	0.5159	+0.1884	+90	+13	5.4
7 Tauri	5.9	+24 14.6	2 23 45.2	+6 56.0	+0.1202	0.5272	+0.1421	+52	−22	6.5
47 B. Aurigae	6.0	+27 57.1	4 19 34.8	+1 17.6	+0.1422	0.5444	+0.0424	+53	−11	8.3
ϰ Geminorum	3.6	+24 33.7	7 16 9.6	−4 31.2	+0.7397	0.5448	−0.1305	+90	+12	11.2
ψ Leonis	5.6	+14 19.6	9 23 35.6	+1 4.3	+1.1955	0.5286	−0.2366	+90	+30	13.5
45 Leonis	5.8	+10 6.1	10 20 51.9	−2 20.0	+0.2736	0.5244	−0.2624	+60	−29	14.4
ρ Leonis	3.8	+ 9 39.0	10 23 23.1	+0 6.4	+0.0788	0.5241	−0.2648	+49	−38	14.5
49 Leonis	5.7	+ 8 59.7	11 0 28.5	+1 9.9	+0.4681	0.5240	−0.2658	+72	−19	14.5

Sternbedeckungen 1933

Elemente der in Mitteleuropa sichtbaren Sternbedeckungen

Stern			Konjunktion in Rektaszension					Grenzen der Sichtbarkeit in geogr. Br.		Alter d. Mondes
Name	Gr.	δ app.	Welt-Zeit	Stundenw. H	Y	x′	y′			
März										
	m	° ′	d h m	h m				°	°	d
79 Leonis	5.5	+ 1 46.3	12 0 27.9	+0 24.1	+1.3093	0.5238	−0.2813	+90	+33	15.5
ψ Virginis	5.0	− 9 10.8	13 19 42.5	−5 44.6	+0.2508	0.5366	−0.2740	+56	−32	17.3
4 Scorpii	5.7	−26 4.4	17 0 16.5	−3 58.5	+0.5666	0.5862	−0.1338	+57	−13	20.5
62 B. Sagittarii	6.0	−28 40.7	19 5 45.0	−0 42.9	+0.5187	0.5931	+0.0369	+47	−15	22.7
τ Sagittarii	3.5	−27 46.3	20 0 46.4	−6 27.9	+0.8671	0.5837	+0.0957	+63	+ 6	23.5
April										
	m	° ′	d h m	h m				°	°	d
406 B. Tauri	5.6	+27 57.2	1 21 56.1	+4 48.5	+0.3839	0.5461	−0.0042	+70	+ 5	6.8
136 Tauri	4.6	+27 36.1	1 22 59.5	+5 49.7	+0.7664	0.5462	−0.0069	+90	+25	6.9
181 B. Geminorum	6.0	+24 22.6	3 22 31.4	+3 43.4	+1.1361	0.5400	−0.1235	+90	+38	8.8
ϰ Geminorum	3.6	+24 33.7	4 0 55.2	+6 2.3	+0.6320	0.5393	−0.1289	+90	+ 6	8.9
α Leonis	1.3	+12 17.6	6 21 22.0	+0 16.0	+0.3315	0.5221	−0.2494	+64	−24	11.8
χ Virginis	4.8	− 7 37.9	9 22 23.1	−1 1.9	+0.6458	0.5379	−0.2794	+79	−12	14.8
83 Virginis	5.6	−15 50.9	11 3 29.8	+3 4.5	+1.0371	0.5578	−0.2522	+75	+13	16.0
τ Scorpii	2.8	−28 4.9	13 22 39.6	−4 25.5	+0.9990	0.6032	−0.0880	+62	+16	18.8
135 B. Scorpii	6.0	−28 23.4	14 1 59.7	−1 13.9	+1.0305	0.6041	−0.0769	+62	+19	19.0
210 B. Scorpii	5.8	−28 45.3	15 4 50.8	+0 28.0	+0.5597	0.6025	+0.0145	+48	−13	20.1
16 Tauri	5.4	+24 4.9	26 19 35.5	+6 12.1	+0.7465	0.5333	+0.1311	+90	+11	2.0
17 Tauri	3.8	+23 54.4	26 19 37.7	+6 14.2	+0.9464	0.5333	+0.1310	+90	+23	2.0
18 Tauri	5.6	+24 38.0	26 19 45.2	+6 21.5	+0.1573	0.5334	+0.1307	+54	−19	2.0
q Tauri	4.3	+24 15.7	26 19 46.8	+6 23.0	+0.5730	0.5334	+0.1307	+84	+ 2	2.0
20 Tauri	4.1	+24 9.7	26 20 4.4	+6 40.0	+0.7208	0.5335	+0.1300	+90	+10	2.0
21 Tauri	5.8	+24 20.9	26 20 6.5	+6 42.1	+0.5182	0.5335	+0.1300	+79	− 1	2.0
23 Tauri	4.3	+23 44.6	26 20 18.8	+6 54.0	+1.2166	0.5336	+0.1295	+88	+45	2.0
η Tauri	2.9	+23 54.1	26 20 51.4	+7 25.5	+1.1110	0.5338	+0.1284	+90	+35	2.1
A Geminorum	5.1	+25 11.0	30 22 52.4	+6 6.7	+0.8608	0.5387	−0.1068	+90	+21	6.2
Mai										
	m	° ′	d h m	h m				°	°	d
ψ Leonis	5.6	+14 19.7	3 18 13.1	−0 42.2	+0.8912	0.5170	−0.2299	+90	+ 8	9.0
ν Leonis	5.0	+12 45.8	4 1 28.3	+6 19.6	+0.8499	0.5158	−0.2392	+90	+ 4	9.3
49 Leonis	5.7	+ 8 59.7	4 20 0.2	+0 17.6	+0.1976	0.5145	−0.2588	+55	−33	10.0
79 Leonis	5.5	+ 1 46.3	5 20 35.8	+0 8.2	+1.1077	0.5180	−0.2753	+90	+17	11.1
44 Leonis	5.9	+ 9 7.5	31 22 51.0	+5 5.1	+1.0404	0.5080	−0.2506	+90	+15	7.6
Juni										
	m	° ′	d h m	h m				°	°	d
χ Virginis	4.8	− 7 37.9	3 18 37.4	−1 11.4	+0.3344	0.5278	−0.2701	+61	−27	10.4
75 Virginis	5.6	−15 1.5	4 19 20.6	−1 17.6	+1.3156	0.5484	−0.2515	+75	+39	11.4
83 Virginis	5.6	−15 50.9	5 0 27.2	+3 38.3	+0.8677	0.5534	−0.2454	+74	+ 3	11.6
τ Scorpii	2.8	−28 5.0	7 18 46.7	−4 42.3	+1.1365	0.6162	−0.0852	+62	+31	14.4
135 B. Scorpii	6.0	−28 23.4	7 21 59.2	−1 38.3	+1.1808	0.6178	−0.0741	+62	+35	14.5
210 B. Scorpii	5.8	−28 45.3	8 23 36.8	−1 10.0	+0.8243	0.6207	+0.0189	+62	+ 4	15.6
38 B. Sagittarii	4.7	−28 28.1	9 2 54.3	+1 58.5	+0.6255	0.6197	+0.0309	+54	− 8	15.7
30 Capricorni	5.4	−18 15.9	12 3 56.8	+0 2.6	+0.8362	0.5521	+0.2257	+72	+ 2	18.8
μ Arietis	5.7	+19 43.8	19 1 27.8	−7 23.4	+0.8960	0.5176	+0.1824	+90	+14	25.7
η Cancri	5.5	+20 40.2	25 19 51.0	+5 36.1	+0.7199	0.5261	−0.1763	+90	+ 4	2.7
υ Leonis	4.5	− 0 27.4	29 18 38.2	+1 34.2	+1.1102	0.5064	−0.2692	+90	+17	6.7

Sternbedeckungen 1933

Elemente der in Mitteleuropa sichtbaren Sternbedeckungen

Stern			Konjunktion in Rektaszension					Grenzen der Sichtbarkeit in geogr. Br.		Alter d. Mondes
Name	Gr.	δ app.	Welt-Zeit	Stundenw. H	Y	x′	y′			
Juli										
	m	° ′	d h m	h m				°	°	d
45 Capricorni	5.8	−15 3.2	10 1 19.4	−1 10.9	+0.4860	0.5477	+0.2459	+65	−19	17.0
293 B. Aquarii	5.5	− 3 51.4	11 21 5.7	−6 49.2	+0.5262	0.5142	+0.2714	+76	−18	18.8
136 Tauri	4.6	+27 36.0	20 0 33.5	−9 26.2	+0.4240	0.5482	−0.0134	+73	+ 6	26.9
August										
	m	° ′	d h m	h m				°	°	d
210 B. Scorpii	5.8	−28 45.3	2 19 41.0	−1 29.7	+0.7632	0.6101	+0.0222	+62	+ 1	11.1
38 B. Sagittarii	4.7	−28 28.1	2 23 4.6	+1 45.0	+0.5727	0.6100	+0.0339	+49	−11	11.3
30 Capricorni	5.4	−18 15.8	6 0 15.0	−0 3.0	+1.0232	0.5605	+0.2320	+72	+14	14.3
ι Capricorni	4.3	−17 7.0	6 2 6.0	+1 44.1	+0.3057	0.5588	+0.2350	+54	−28	14.4
e Aquarii	5.4	−11 53.4	6 23 41.0	−1 25.9	+0.4157	0.5402	+0.2610	+65	−22	15.3
21 Piscium	5.6	+ 0 42.6	8 23 49.4	−2 48.6	+0.5720	0.5133	+0.2735	+79	−15	17.3
51 Piscium	5.6	+ 6 35.5	9 21 48.2	−5 29.0	+0.3126	0.5091	+0.2626	+61	−27	18.2
ε Arietis (med.)	4.6	+21 4.7	12 23 44.8	−5 46.8	+1.1639	0.5242	+0.1676	+90	+36	21.3
16 Tauri	5.4	+24 5.0	13 21 23.6	−8 49.8	+1.0400	0.5328	+0.1247	+90	+31	22.2
17 Tauri	3.8	+23 54.5	13 21 25.8	−8 47.7	+1.2386	0.5328	+0.1246	+85	+49	22.2
18 Tauri	5.6	+24 38.1	13 21 33.3	−8 40.4	+0.4529	0.5329	+0.1243	+73	− 3	22.2
q Tauri	4.3	+24 15.7	13 21 34.8	−8 39.0	+0.8663	0.5328	+0.1243	+90	+19	22.2
20 Tauri	4.1	+24 9.8	13 21 52.3	−8 22.1	+1.0115	0.5330	+0.1237	+90	+29	22.2
21 Tauri	5.8	+24 21.0	13 21 54.4	−8 20.0	+0.8097	0.5330	+0.1236	+90	+16	22.2
A Geminorum	5.1	+25 10.9	18 0 21.6	−9 14.2	+0.5442	0.5409	−0.1128	+81	+ 2	26.3
τ Scorpii	2.8	−28 5.0	28 19 56.2	+1 50.7	+0.9671	0.5923	−0.0785	+62	+15	7.6
September										
	m	° ′	d h m	h m				°	°	d
45 Capricorni	5.8	−15 3.2	2 21 2.2	−1 52.0	+0.5365	0.5464	+0.2467	+69	−17	12.7
μ Capricorni	5.2	−13 51.8	3 1 14.1	+2 11.3	+0.3750	0.5434	+0.2517	+60	−25	12.9
14 Piscium	5.9	− 1 36.7	5 1 43.9	+1 8.0	+0.8542	0.5181	+0.2762	+89	0	14.9
μ Arietis	5.7	+19 44.0	8 23 59.6	−3 28.6	+1.1748	0.5256	+0.1835	+90	+35	18.8
7 Tauri	5.9	+24 14.8	10 0 39.0	−3 37.1	+0.2029	0.5340	+0.1354	+57	−17	19.8
ψ Leonis	5.6	+14 19.7	17 4 3.3	−5 54.2	+0.2323	0.5170	−0.2328	+58	−27	27.0
30 Capricorni	5.4	−18 15.8	29 16 37.0	−4 5.4	+1.1055	0.5478	+0.2261	+72	+19	9.9
ι Capricorni	4.3	−17 7.0	29 18 32.9	−2 13.4	+0.3719	0.5464	+0.2290	+57	−25	10.0
e Aquarii	5.4	−11 53.4	30 16 57.9	−4 33.3	+0.4644	0.5315	+0.2559	+67	−21	10.9
Oktober										
	m	° ′	d h m	h m				°	°	d
293 B. Aquarii	5.5	− 3 51.3	2 0 49.1	+2 18.1	+0.6338	0.5177	+0.2728	+84	−12	12.2
21 Piscium	5.6	+ 0 42.7	2 17 58.6	−5 3.5	+0.5564	0.5141	+0.2725	+78	−16	12.9
136 Tauri	4.6	+27 36.0	9 23 37.8	−4 58.9	+0.2876	0.5454	−0.0144	+62	− 1	20.2
181 B. Geminorum	6.0	+24 22.5	12 0 4.6	−6 10.2	+0.3442	0.5328	−0.1272	+65	− 9	22.2
η Cancri	5.5	+20 40.1	13 1 44.0	−5 20.2	+0.4888	0.5234	−0.1768	+75	− 8	23.3
d Leonis	5.1	+ 3 58.5	16 4 35.0	−4 45.2	+1.2348	0.5121	−0.2658	+90	+28	26.4
4 Scorpii	5.7	−26 4.4	21 16 46.6	+2 53.8	+0.7408	0.5951	−0.1250	+64	− 2	2.5
38 B. Sagittarii	4.7	−28 28.1	23 17 39.2	+1 42.1	+0.8460	0.6024	+0.0343	+62	+ 6	4.5
30 Capricorni	5.4	−18 15.8	26 22 13.7	+3 18.8	+1.3158	0.5444	+0.2238	+72	+43	7.7
e Aquarii	5.4	−11 53.4	27 22 54.4	+3 10.7	+0.6533	0.5268	+0.2522	+79	−10	8.8
14 Piscium	5.9	− 1 36.6	29 16 51.8	−4 8.7	+0.9854	0.5104	+0.2688	+89	+ 9	10.5
21 Piscium	5.6	+ 0 42.7	30 0 47.0	+3 32.5	+0.6662	0.5094	+0.2679	+87	−10	10.8
51 Piscium	5.6	+ 6 35.6	30 23 3.3	+1 9.5	+0.3213	0.5097	+0.2592	+62	−27	11.8

Elemente der in Mitteleuropa sichtbaren Sternbedeckungen

Stern			Konjunktion in Rektaszension					Grenzen der Sichtbarkeit in geogr. Br.	Alter d. Mondes
Name	Gr.	δ app.	Welt-Zeit	Stundenw. H	Y	x'	y'		
November									
	m	° ′	d h m	h m				° °	d
μ Arietis	5·7	+19 44·1	2 16 9·6	−7 43·1	+0·9698	0·5301	+0·1819	+90 +19	14·5
ε Arietis (med.)	4·6	+21 4·8	3 0 10·7	+0 2·5	+0·9053	0·5334	+0·1672	+90 +18	14·8
16 Tauri	5·4	+24 5·2	3 21 24·3	−3 25·8	+0·7208	0·5412	+0·1237	+90 +11	15·7
17 Tauri	3·8	+23 54·6	3 21 26·4	−3 23·8	+0·9183	0·5412	+0·1237	+90 +23	15·7
18 Tauri	5·6	+24 38·2	3 21 33·8	−3 16·7	+0·1361	0·5413	+0·1234	+52 −20	15·7
q Tauri	4·3	+24 15·9	3 21 35·3	−3 15·2	+0·5474	0·5413	+0·1233	+81 + 1	15·7
20 Tauri	4·1	+24 9·9	3 21 52·5	−2 58·6	+0·6910	0·5414	+0·1227	+90 + 9	15·7
21 Tauri	5·8	+24 21·2	3 21 54·6	−2 56·6	+0·4902	0·5414	+0·1226	+76 − 1	15·7
23 Tauri	4·3	+23 44·8	3 22 6·6	−2 45·0	+1·1797	0·5414	+0·1222	+90 +43	15·7
η Tauri	2·9	+23 54·3	3 22 38·3	−2 14·3	+1·0704	0·5416	+0·1210	+90 +33	15·7
27 Tauri	3·7	+23 51·4	3 23 24·6	−1 29·6	+1·2174	0·5419	+0·1193	+87 +48	15·8
28 Tauri	5·2	+23 56·4	3 23 25·2	−1 29·0	+1·1270	0·5419	+0·1193	+90 +39	15·8
112 B. Aurigae	5·7	+26 53·2	5 23 59·1	−2 34·9	+0·8951	0·5479	+0·0023	+90 +33	17·8
A Geminorum	5·1	+25 10·8	8 0 29·6	−3 42·9	+0·0618	0·5342	−0·1118	+47 −22	19·8
μ Cancri	5·5	+21 46·5	8 21 40·4	−7 13·0	+1·0002	0·5249	−0·1540	+90 +25	20·7
49 B. Cancri	6·0	+20 57·5	9 3 49·5	−1 15·5	+0·9188	0·5222	−0·1651	+90 +17	21·0
48 Leonis	5·2	+ 7 17·7	12 0 47·8	−6 20·7	+0·9378	0·5049	−0·2524	+90 + 7	23·8
79 Leonis	5·5	+ 1 46·3	13 2 29·9	−5 23·7	+0·0966	0·5090	−0·2665	+49 −39	24·9
Φ Sagittarii	3·3	−27 3·8	20 15 20·6	+0 35·8	+0·4461	0·6067	+0·0823	+46 −19	2·9
44 Capricorni	6·0	−14 42·2	23 15 39·8	−1 51·1	+0·6300	0·5390	+0·2404	+74 −11	6·0
45 Capricorni	5·8	−15 3·2	23 16 5·8	−1 25·9	+1·0931	0·5387	+0·2408	+75 +18	6·0
μ Capricorni	5·2	−13 51·9	23 20 24·2	+2 43·9	+0·9240	0·5351	+0·2453	+77 + 6	6·2
14 Piscium	5·9	− 1 36·7	25 22 30·0	+3 16·9	+1·2514	0·5084	+0·2663	+89 +28	8·2
μ Arietis	5·7	+19 44·1	29 22 39·6	+0 34·4	+1·0262	0·5278	+0·1785	+90 +23	12·2
Dezember									
	m	° ′	d h m	h m				° °	d
16 Tauri	5·4	+24 5·2	1 4 5·9	+5 3·2	+0·7010	0·5405	+0·1211	+90 +10	13·5
17 Tauri	3·8	+23 54·6	1 4 8·0	+5 5·3	+0·8991	0·5405	+0·1210	+90 +22	13·5
18 Tauri	5·6	+24 38·2	1 4 15·4	+5 12·5	+0·1141	0·5406	+0·1207	+50 −21	13·5
q Tauri	4·3	+24 15·9	1 4 16·9	+5 13·9	+0·5267	0·5406	+0·1207	+79 0	13·5
20 Tauri	4·1	+24 10·0	1 4 34·2	+5 30·6	+0·6702	0·5407	+0·1201	+90 + 8	13·5
21 Tauri	5·8	+24 21·2	1 4 36·3	+5 32·6	+0·4685	0·5407	+0·1200	+74 − 3	13·5
23 Tauri	4·3	+23 44·8	1 4 48·3	+5 44·2	+1·1597	0·5408	+0·1196	+90 +42	13·5
η Tauri	2·9	+23 54·3	1 5 20·2	+6 15·1	+1·0488	0·5410	+0·1184	+90 +33	13·5
27 Tauri	3·7	+23 51·4	1 6 6·7	+7 0·0	+1·1944	0·5412	+0·1167	+90 +45	13·6
28 Tauri	5·2	+23 56·4	1 6 7·3	+7 0·6	+1·1035	0·5412	+0·1167	+90 +37	13·6
χ Tauri	5·3	+25 28·7	1 21 20·8	−2 16·6	+0·9258	0·5460	+0·0820	+90 +27	14·2
112 B. Aurigae	5·7	+26 53·2	3 6 47·2	+6 0·8	+0·7579	0·5493	+0·0002	+90 +25	15·6
37 Geminorum	5·7	+25 27·7	4 18 12·6	−7 46·3	+0·8195	0·5408	−0·0849	+90 +21	17·1
μ Cancri	5·5	+21 46·5	6 4 36·8	+1 31·0	+0·7342	0·5247	−0·1552	+90 + 8	18·5
δ Cancri	4·2	+18 23·9	6 23 0·0	−4 39·8	+1·3237	0·5157	−0·1858	+77 +52	19·3
d Leonis	5·1	+ 3 58·3	9 22 44·8	−6 59·5	+0·6838	0·4992	−0·2571	+90 − 8	22·2
75 Virginis	5·6	−15 1·4	13 3 30·3	−4 33·6	+0·7410	0·5418	−0·2396	+75 − 4	25·4
ι Capricorni	4·3	−17 7·1	20 14 31·7	−0 52·0	+1·1013	0·5580	+0·2342	+73 +19	3·5
χ Tauri	5·3	+25 28·7	29 3 26·2	+5 36·1	+1·0059	0·5439	+0·0796	+90 +34	12·0

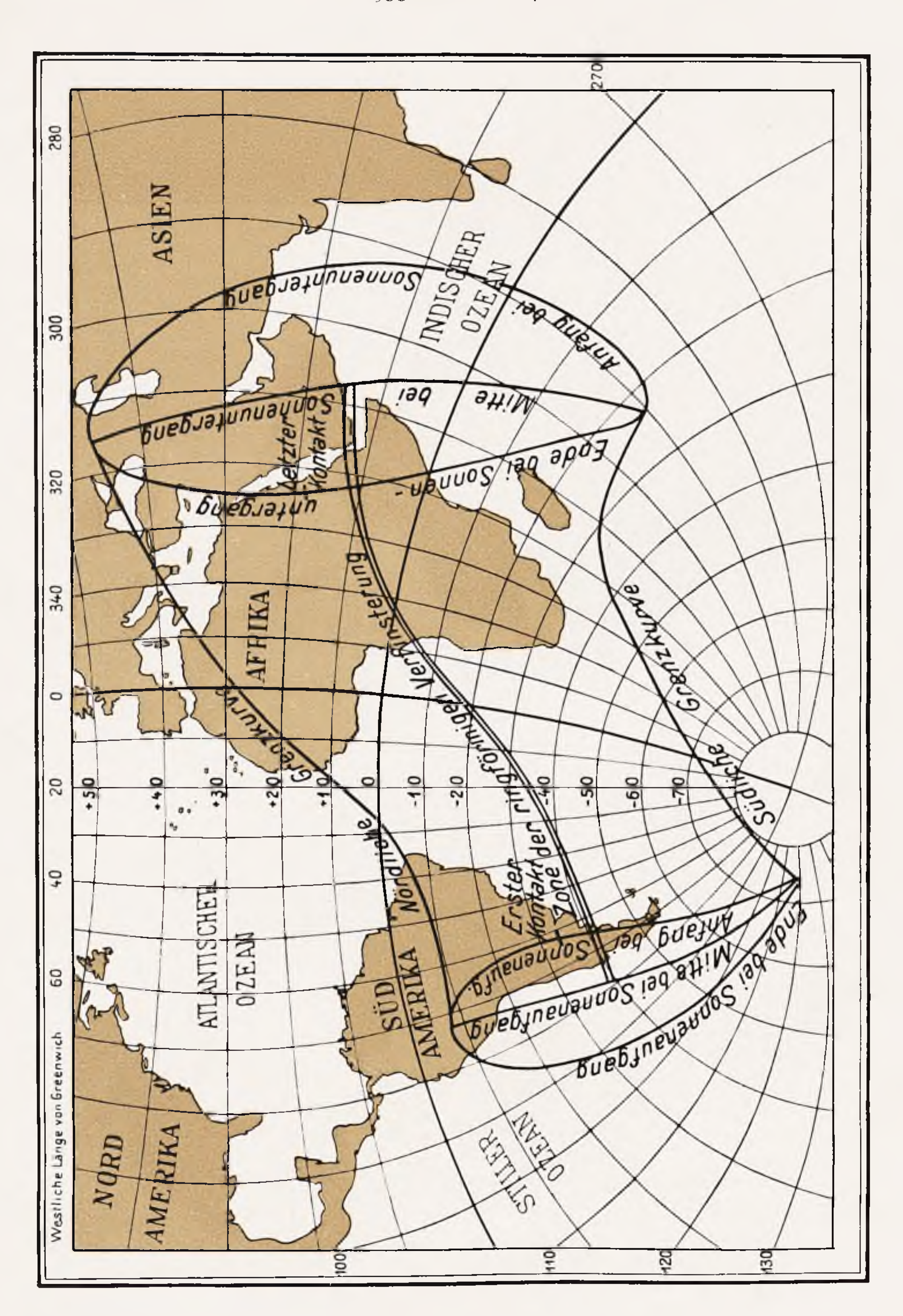
Sternbedeckungen 1933

Ein- und Austritte für Berlin-Babelsberg

Tag	Stern	Größe	Phase	Welt-Zeit	P	a	b	Alter des Mondes
1933		m		h m		m	m	d
Jan. 1	316 B. Aquarii	6.5	E.	17 44.5	40	−0.8	+0.4	5.2
3	δ Piscium	4.5	E.	17 6	83	−1.8	+0.2	7.1
9	406 B. Tauri	5.6	E.	20 47	74	−1.5	+1.1	13.4
11	ϰ Geminorum	3.6	E.	23 1.5	156	−1.0	−3.0	15.5
11	ϰ Geminorum	3.6	A.	23 55.5	242	−2.1	+1.2	15.5
13	12 B. Leonis	6.3	A.	22 4	276	−1.1	+1.1	17.4
Febr. 1	20 H.^{1} Arietis	6.4	E.	21 49.5	86	−0.2	−1.6	6.9
3	18 Tauri	5.6	E.	21 1	55	−1.2	−0.1	8.9
3	21 Tauri	5.8	E.	21 32.5	136	—	—	8.9
3	22 Tauri	6.5	E.	21 46.5	154	—	—	8.9
5	107 B. Aurigae	6.5	E.	23 34	152	+0.3	−3.8	11.0
März 8	5 B. Cancri	6.4	E.	0 12	60	−1.2	−0.8	11.5
April 3	176 B. Geminorum	6.3	E.	23 3	164	+0.7	−2.7	8.9
14	135 B. Scorpii	6.0	A.	2 28.5	268	−1.5	−0.1	19.0
Mai 1	9 Cancri	6.2	E.	19 21	151	−0.2	−2.7	7.0
5	79 Leonis	5.5	E.	20 51.5	167	−0.4	−2.0	11.1
30	7 Leonis	6.2	E.	22 17	130	+0.2	−1.8	6.5
Juni 14	78 Aquarii	6.3	A.	1 4	198	−0.5	+2.0	20.6
Aug. 11	20 H.^{1} Arietis	6.4	A.	22 29	227	+0.1	+1.9	20.2
12	ε Arietis (med.)	4.6	A.	22 44	197	+0.6	+2.2	21.2
Sept. 17	ψ Leonis	5.6	A.	2 54.5	356	−0.6	−2.3	26.9
28	36 B. Capricorni	6.2	E.	19 19.5	129	—	—	9.0
Okt. 6	26 Arietis	6.2	A.	4 7.5	317	—	—	16.4
10	415 B. Tauri	6.1	A.	3 18.5	309	−1.7	−1.6	20.3
12	181 B. Geminorum	6.0	A.	23 3.5	346	—	—	23.2
13	η Cancri	5.5	A.	1 5.5	288	−0.4	+1.1	23.2
30	21 Piscium	5.6	E.	1 25.5	101	−0.4	−2.2	10.9
30	51 Piscium	5.6	E.	23 38.5	19	−0.6	+1.4	11.8
Nov. 3	17 Tauri	3.8	E.	20 4	125	−1.5	+0.6	15.6
3	*q* Tauri	4.3	E.	20 17.5	47	−0.3	+2.3	15.6
3	20 Tauri	4.1	E.	20 29	80	−0.7	+1.7	15.7
3	17 Tauri	3.8	A.	20 41.5	192	+0.4	+3.5	15.7
3	16 Tauri	5.4	A.	21 3.5	239	−0.7	+2.0	15.7
3	*q* Tauri	4.3	A.	21 23	270	−1.2	+1.3	15.7
3	20 Tauri	4.1	A.	21 39	237	−0.8	+2.0	15.7
14	78 B. Virginis	6.5	A.	3 24.5	266	−0.6	+1.8	25.9
24	167 G. Aquarii	6.3	E.	18 4	31	−0.8	+0.9	7.1
24	67 Aquarii	6.4	E.	21 28	13	0.0	+1.1	7.2
25	13 Piscium	6.4	E.	21 50	113	−1.3	−3.1	8.2
Dez. 1	*q* Tauri	4.3	E.	4 59	54	−0.1	−0.7	13.5
1	20 Tauri	4.1	E.	5 10	81	+0.2	−1.2	13.5
5	52 Geminorum	6.1	A.	4 24	312	−0.5	−2.4	17.5
25	101 Piscium	6.2	E.	19 27.5	37	−1.0	+1.4	8.7
26	26 Arietis	6.2	E.	23 27	49	−0.8	−0.2	9.9

Ringförmige Sonnenfinsternis

1933 Februar 24

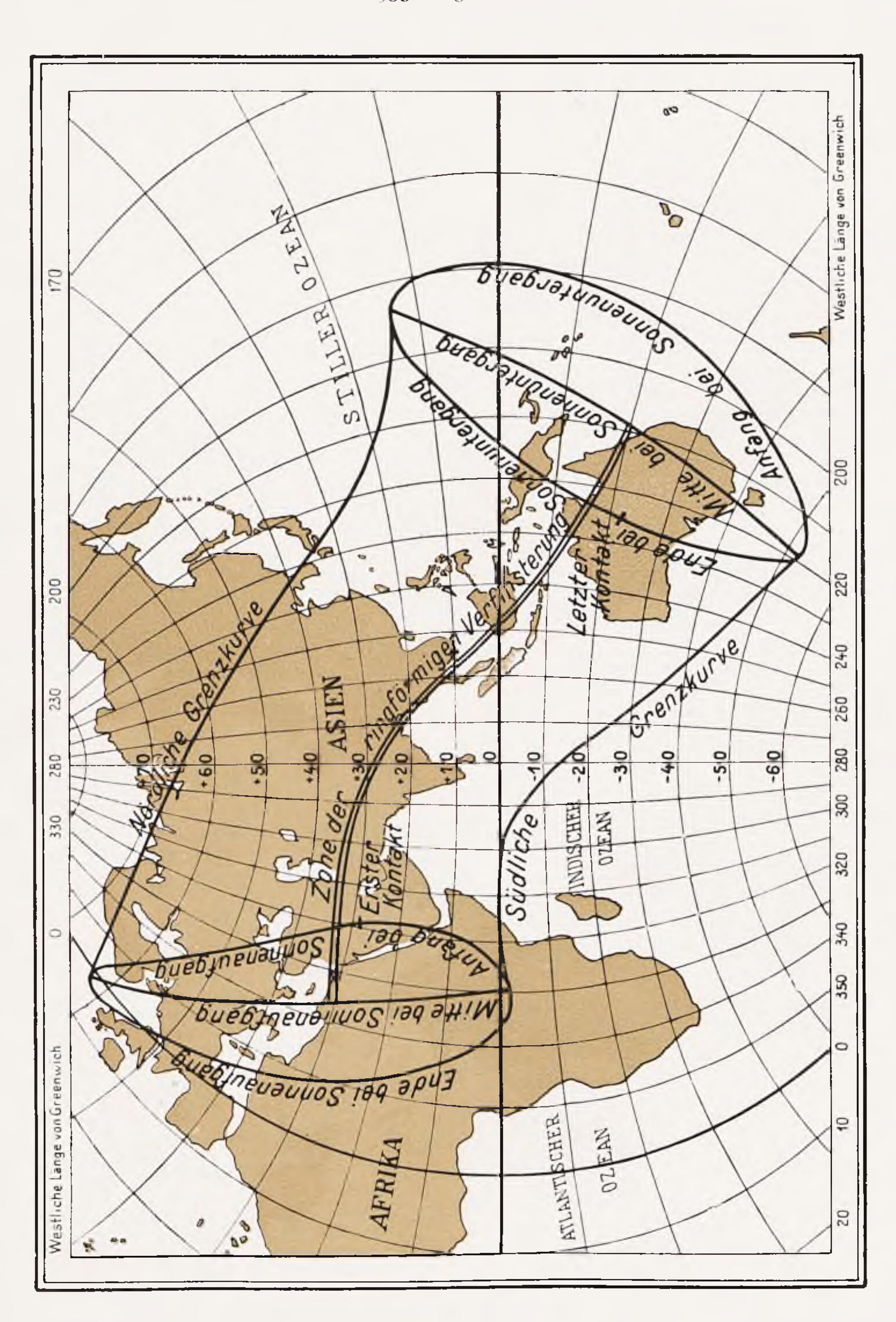


Zu Seite 278*



Ringförmige Sonnenfinsternis

1933 August 21



Zu Seite 280*



Sternbedeckungen 1933

Ein- und Austritte für Königsberg

Tag		Stern	Größe	Phase	Welt-Zeit	P	a	b	Alter des Mondes
1933			m		h m	°	m	m	d
Jan.	1	316 B. Aquarii	6.5	E.	17 50	42	−0.6	+0.1	5.2
	3	δ Piscium	4.5	E.	17 19	88	−1.7	−0.4	7.2
	9	406 B. Tauri	5.6	E.	21 0.5	68	−1.5	+1.0	13.4
	9	136 Tauri	4.6	E.	22 45	156	—	—	13.4
	11	ϰ Geminorum	3.6	E.	23 4	140	−1.1	−2.0	15.5
	12	ϰ Geminorum	3.6	A.	0 10	259	−1.6	−0.2	15.5
	13	12 B. Leonis	6.3	A.	22 14.5	287	−1.2	+0.5	17.4
Febr.	1	20 H.[1] Arietis	6.4	E.	21 47.5	75	−0.1	−1.3	6.9
	3	18 Tauri	5.6	E.	21 9	43	−1.1	+0.2	8.9
	3	q Tauri	4.3	E.	21 14	141	—	—	8.9
	3	21 Tauri	5.8	E.	21 28	120	−0.4	−2.8	8.9
	3	22 Tauri	6.5	E.	21 36.5	131	−0.2	−3.4	8.9
	5	107 B. Aurigae	6.5	E.	23 26.5	134	0.0	−2.7	11.0
März	4	38 B. Aurigae	6.5	E.	16 47.5	78	−1.5	+0.5	8.2
	8	5 B. Cancri	6.4	E.	0 24.5	30	—	—	11.5
Mai	1	9 Cancri	6.2	E.	19 17.5	136	−0.3	−2.3	7.0
	5	79 Leonis	5.5	E.	20 51	152	−0.6	−1.7	11.1
Juni	14	78 Aquarii	6.3	A.	1 12	193	−0.5	+1.9	20.7
	19	μ Arietis	5.7	A.	0 53	271	+0.2	+1.6	25.6
Aug.	11	20 H.[1] Arietis	6.4	A.	22 33	223	0.0	+2.0	20.2
	12	ε Arietis (med.)	4.6	A.	22 44.5	190	+0.6	+2.5	21.2
Sept.	16	139 B. Cancri	6.1	A.	1 12	257	+0.3	+1.9	25.9
	17	ψ Leonis	5.6	A.	2 53	7	—	—	26.9
	28	36 B. Capricorni	6.2	E.	19 41	148	—	—	9.0
Okt.	10	415 B. Tauri	6.1	A.	3 25.5	319	−1.4	−2.6	20.3
	11	181 B. Geminorum	6.0	A.	23 8	343	—	—	22.2
	13	η Cancri	5.5	A.	1 11.5	291	−0.6	+1.0	23.2
	30	51 Piscium	5.6	E.	23 45	17	−0.5	+1.3	11.8
Nov.	3	17 Tauri	3.8	E.	20 16.5	134	—	—	15.6
	3	q Tauri	4.3	E.	20 25.5	51	−0.5	+2.2	15.7
	3	20 Tauri	4.1	E.	20 39	85	−1.0	+1.5	15.7
	3	17 Tauri	3.8	A.	20 46.5	184	—	—	15.7
	3	16 Tauri	5.4	A.	21 13.5	235	−0.8	+2.0	15.7
	3	q Tauri	4.3	A.	21 35	267	−1.3	+1.1	15.7
	3	20 Tauri	4.1	A.	21 50	234	−0.9	+1.9	15.7
	14	78 B. Virginis	6.5	A.	3 33	280	−0.7	+1.3	25.9
	23	45 Capricorni	5.8	E.	15 22.5	87	−1.5	+0.5	5.9
	24	167 G. Aquarii	6.3	E.	18 11	37	−0.7	+0.5	7.1
	25	13 Piscium	6.4	E.	21 51.5	109	−0.9	−2.8	8.2
Dez.	4	37 Geminorum	5.7	A.	17 39.5	255	+0.4	+1.7	17.0
	5	52 Geminorum	6.1	A.	4 20.5	326	−0.1	−2.7	17.5
	25	101 Piscium	6.2	E.	19 37.5	36	−1.0	+1.0	8.7
	26	26 Arietis	6.2	E.	23 32	37	−0.7	−0.1	9.9

Sternbedeckungen 1933

Ein- und Austritte für München

Tag		Stern	Größe	Phase	Welt-Zeit	P	a	b	Alter des Mondes
1933			m		h m	°	m	m	d
Jan.	1	316 B. Aquarii	6.5	E.	17 42	49	−1.0	+0.3	5.2
	3	δ Piscium	4.5	E.	17 3	92	−2.3	0.0	7.2
	9	406 B. Tauri	5.6	E.	20 41	88	−1.7	+0.6	13.4
	11	ϰ Geminorum	3.6	E.	23 24.5	192	—	—	15.5
	11	ϰ Geminorum	3.6	A.	23 36.5	208	—	—	15.5
	13	12 B. Leonis	6.3	A.	21 56	260	−1.2	+1.9	17.4
Febr.	1	20 H¹. Arietis	6.4	E.	21 57	102	−0.2	−2.0	6.9
	3	18 Tauri	5.6	E.	21 0.5	70	−1.3	−0.6	8.9
März	4	47 B. Aurigae	6.0	E.	20 9.5	24	—	—	8.3
	8	5 B. Cancri	6.4	E.	0 14.5	72	−1.1	−1.1	11.5
April	3	176 B. Geminorum	6.3	E.	23 17.5	179	—	—	8.9
	14	135 B. Scorpii	6.0	A.	2 26.5	265	−1.7	+0.1	19.0
Mai	1	9 Cancri	6.2	E.	19 33.5	164	+0.2	−3.2	7.0
	5	79 Leonis	5.5	E.	21 0.5	177	−0.1	−2.5	11.1
	30	7 Leonis	6.2	E.	22 25	134	+0.3	−1.8	6.5
Juni	14	78 Aquarii	6.3	A.	0 54	195	−0.5	+2.1	20.6
Aug.	11	20 H¹. Arietis	6.4	A.	22 21	225	+0.2	+1.9	20.2
	12	ε Arietis (Mitte)	4.6	A.	22 35	193	+0.8	+2.3	21.2
Sept.	3	μ Capricorni	5.2	E.	2 1	29	−0.2	+0.4	12.9
	15	9 Cancri	6.2	A.	3 51	280	−0.9	+1.1	25.0
	28	36 B. Capricorni	6.2	E.	19 24	136	—	—	9.0
Okt.	6	26 Arietis	6.2	A.	4 21.5	292	−0.9	−2.7	16.4
	10	415 B. Tauri	6.1	A.	3 20.5	292	−1.9	−0.8	20.3
	11	181 B. Geminorum	6.0	A.	23 5.5	329	−0.6	−0.4	22.2
	13	η Cancri	5.5	A.	0 59.5	277	−0.3	+1.4	23.2
	30	21 Piscium	5.6	E.	1 37	124	—	—	10.9
	30	51 Piscium	5.6	E.	23 32	33	−0.8	+0.9	11.8
Nov.	3	17 Tauri	3.8	E.	20 0.5	135	—	—	15.6
	3	q Tauri	4.3	E.	20 8	52	−0.3	+2.2	15.6
	3	20 Tauri	4.1	E.	20 21	86	−0.8	+1.6	15.6
	3	17 Tauri	3.8	A.	20 26	179	—	—	15.7
	3	16 Tauri	5.4	A.	20 53.5	233	−0.6	+2.2	15.7
	3	q Tauri	4.3	A.	21 15.5	263	−1.1	+1.5	15.7
	3	20 Tauri	4.1	A.	21 28.5	229	−0.7	+2.3	15.7
	14	78 B. Virginis	6.5	A.	3 13.5	244	−0.8	+3.3	25.9
	21	308 B. Sagittarii	6.3	E.	17 40	51	−0.7	−0.3	4.0
	24	167 G. Aquarii	6.3	E.	17 58.5	37	−1.0	+1.0	7.0
	24	67 Aquarii	6.4	E.	21 24.5	28	−0.3	+0.6	7.2
Dez.	1	q Tauri	4.3	E.	5 2	66	0.0	−0.8	13.5
	1	20 Tauri	4.1	E.	5 16	92	+0.3	−1.3	13.5
	5	52 Geminorum	6.1	A.	4 32.5	301	−0.7	−2.1	17.5
	25	101 Piscium	6.2	E.	19 20.5	48	−1.3	+1.2	8.7
	26	26 Arietis	6.2	E.	23 27	64	−0.9	−0.6	9.9

0h Welt-Zeit	Mondbewegung			Lage des Mondäquators gegen den Erdäquator							
	☊	$L_☾$	$M_☾$	i	diff.	Δ	diff.	☊′	diff.	$\Delta - ☋$	diff.
1933	°	°	°	°		°		°		°	
Jan. −8	341.3800	213.5472	337.41	21.995		160.170		1.312		358.790	
+2	340.8504	345.3112	108.06	22.000	5	159.607	563	1.348	36	358.757	33
12	340.3209	117.0751	238.71	22.005	5	159.045	562	1.383	35	358.724	33
22	339.7914	248.8391	9.36	22.010	5	158.483	562	1.418	35	358.692	32
Febr. 1	339.2618	20.6031	140.01	22.015	5	157.921	562	1.454	36	358.659	33
11	338.7323	152.3670	270.66	22.021	6	157.359	562	1.489	35	358.627	32
21	338.2028	284.1310	41.31	22.026	5	156.797	562	1.524	35	358.595	32
März 3	337.6732	55.8950	171.96	22.032	6	156.236	561	1.558	34	358.563	32
13	337.1437	187.6589	302.61	22.038	6	155.674	562	1.593	35	358.531	32
23	336.6141	319.4229	73.26	22.043	5	155.113	561	1.628	35	358.499	32
April 2	336.0846	91.1869	203.91	22.050	7	154.552	561	1.662	34	358.467	32
12	335.5551	222.9508	334.56	22.056	6	153.991	561	1.696	34	358.436	31
22	335.0255	354.7148	105.21	22.062	6	153.430	561	1.730	34	358.405	31
Mai 2	334.4960	126.4788	235.86	22.068	6	152.870	560	1.764	34	358.374	31
12	333.9664	258.2427	6.51	22.075	7	152.309	561	1.797	33	358.343	31
22	333.4369	30.0067	137.16	22.082	7	151.749	560	1.831	34	358.312	31
Juni 1	332.9074	161.7707	267.81	22.088	6	151.189	560	1.864	33	358.281	31
11	332.3778	293.5346	38.46	22.095	7	150.629	560	1.897	33	358.251	30
21	331.8483	65.2986	169.11	22.102	7	150.069	560	1.930	33	358.220	31
Juli 1	331.3187	197.0626	299.76	22.110	8	149.509	560	1.962	32	358.190	30
11	330.7892	328.8265	70.41	22.117	7	148.950	559	1.995	33	358.160	30
21	330.2597	100.5905	201.06	22.124	7	148.390	560	2.027	32	358.131	29
31	329.7301	232.3545	331.71	22.132	8	147.832	558	2.059	32	358.101	30
Aug. 10	329.2006	4.1184	102.36	22.139	7	147.273	559	2.091	32	358.072	29
20	328.6710	135.8824	233.01	22.147	8	146.714	559	2.123	32	358.043	29
30	328.1415	267.6464	3.66	22.155	8	146.156	558	2.154	31	358.014	29
Sept. 9	327.6120	39.4103	134.31	22.163	8	145.597	559	2.185	31	357.985	29
19	327.0824	171.1743	264.96	22.171	8	145.039	558	2.216	31	357.957	28
29	326.5529	302.9383	35.61	22.179	8	144.481	558	2.247	31	357.928	29
Okt. 9	326.0234	74.7022	166.26	22.188	9	143.924	557	2.278	31	357.900	28
19	325.4938	206.4662	296.91	22.196	8	143.366	558	2.308	30	357.872	28
29	324.9643	338.2302	67.56	22.204	8	142.809	557	2.338	30	357.845	27
Nov. 8	324.4347	109.9941	198.21	22.213	9	142.252	557	2.368	30	357.817	28
18	323.9052	241.7581	328.86	22.222	9	141.695	557	2.398	30	357.790	27
28	323.3757	13.5221	99.51	22.231	9	141.139	556	2.427	29	357.763	27
Dez. 8	322.8461	145.2860	230.16	22.240	9	140.582	557	2.456	29	357.736	27
18	322.3166	277.0500	0.81	22.249	9	140.026	556	2.485	29	357.710	26
28	321.7870	48.8140	131.46	22.258	9	139.470	556	2.514	29	357.684	26
38	321.2575	180.5779	262.11	22.267	9	138.915	555	2.542	28	357.657	27

Mondkrater Mösting A. 1933

Tag		0ʰ Welt-Zeit								
		$\alpha_{☾}-\alpha_k$			$\delta_{☾}-\delta_k$			log sin p_k		
1933		s	s	s	"	"	"			
Jan.	5	− 8.32	+1.23		− 74.2	− 0.7		8.20133	−198	
	6	− 7.09	+1.12	−0.11	− 74.9	+ 2.5	+ 3.2	8.19935	− 69	+129
	7	− 5.97	+0.99	−0.13	− 72.4	+ 5.1	+ 2.6	8.19866	+ 50	+119
	8	− 4.98	+0.89	−0.10	− 67.3	+ 7.6	+ 2.5	8.19916	+151	+101
	9	− 4.09	+0.83	−0.06	− 59.7	+ 9.8	+ 2.2	8.20067	+231	+ 80
	10	− 3.26	+0.81	−0.02	− 49.9	+12.2	+ 2.4	8.20298	+291	+ 60
	11	− 2.45	+0.84	+0.03	− 37.7	+14.6	+ 2.4	8.20589	+333	+ 42
	12	− 1.61	+0.88	+0.04	− 23.1	+16.8	+ 2.2	8.20922	+357	+ 24
	13	− 0.73	+0.89	+0.01	− 6.3	+19.1	+ 2.3	8.21279	+369	+ 12
	14	+ 0.16	+0.86	−0.03	+ 12.8	+21.1	+ 2.0	8.21648	+375	+ 6
	15	+ 1.02	+0.75	−0.11	+ 33.9	+22.8	+ 1.7	8.22023	+376	+ 1
	16	+ 1.77	+0.55	−0.20	+ 56.7	+24.4	+ 1.6	8.22399	+377	+ 1
	17	+ 2.32	+0.24	−0.31	+ 81.1	+25.2	+ 0.8	8.22776	+371	− 6
	18	+ 2.56	−0.25	−0.49	+106.3	+24.9	− 0.3	8.23147	+359	− 12
	19	+ 2.31			+131.2			8.23506		
		s	s	s	"	"	"			
Febr.	4	− 5.23	+0.95		− 71.8	+ 7.3		8.19955	+ 84	
	5	− 4.28	+0.88	−0.07	− 64.5	+ 9.6	+ 2.3	8.20039	+209	+125
	6	− 3.40	+0.84	−0.04	− 54.9	+11.7	+ 2.1	8.20248	+311	+102
	7	− 2.56	+0.81	−0.03	− 43.2	+14.2	+ 2.5	8.20559	+389	+ 78
	8	− 1.75	+0.79	−0.02	− 29.0	+16.9	+ 2.7	8.20948	+436	+ 47
	9	− 0.96	+0.74	−0.05	− 12.1	+19.9	+ 3.0	8.21384	+451	+ 15
	10	− 0.22	+0.68	−0.06	+ 7.8	+22.7	+ 2.8	8.21835	+438	− 13
	11	+ 0.46	+0.56	−0.12	+ 30.5	+25.3	+ 2.6	8.22273	+400	− 38
	12	+ 1.02	+0.37	−0.19	+ 55.8	+26.8	+ 1.5	8.22673	+345	− 55
	13	+ 1.39	+0.07	−0.30	+ 82.6	+27.2	+ 0.4	8.23018	+283	− 62
	14	+ 1.46	−0.31	−0.38	+109.8	+25.8	− 1.4	8.23301	+220	− 63
	15	+ 1.15	−0.89	−0.58	+135.6	+22.3	− 3.5	8.23521	+161	− 59
	16	+ 0.26	−1.59	−0.70	+157.9	+16.1	− 6.2	8.23682	+106	− 55
	17	− 1.33			+174.0			8.23788		
		s	s	s	"	"	"			
März	5	− 3.29	+0.97		− 58.5	+10.6		8.20084	+243	
	6	− 2.32	+0.96	−0.01	− 47.9	+12.5	+ 1.9	8.20327	+369	+126
	7	− 1.36	+0.91	−0.05	− 35.4	+14.8	+ 2.3	8.20696	+470	+101
	8	− 0.45	+0.81	−0.10	− 20.6	+17.8	+ 3.0	8.21166	+540	+ 70
	9	+ 0.36	+0.67	−0.14	− 2.8	+21.2	+ 3.4	8.21706	+567	+ 27
	10	+ 1.03	+0.48	−0.19	+ 18.4	+25.0	+ 3.8	8.22273	+553	− 14
	11	+ 1.51	+0.23	−0.25	+ 43.4	+28.3	+ 3.3	8.22826	+495	− 58
	12	+ 1.74	−0.11	−0.34	+ 71.7	+30.1	+ 1.8	8.23321	+401	− 94

Tag		0h Welt-Zeit								
		$\alpha_{☾} - \alpha_k$			$\delta_{☾} - \delta_k$			log sin p_k		
1933		s	s	s	"	"	"			
März	12	+ 1.74	−0.11	−0.34	+ 71.7	+30.1	+ 1.8	8.23321	+401	− 94
	13	+ 1.63	−0.57	−0.46	+101.8	+29.7	− 0.4	8.23722	+279	−122
	14	+ 1.06	−1.17	−0.60	+131.5	+26.2	− 3.5	8.24001	+151	−128
	15	− 0.11	−1.87	−0.70	+157.7	+19.1	− 7.1	8.24152	+ 26	−125
	16	− 1.98	−2.53	−0.66	+176.8	+ 8.0	−11.1	8.24178	− 80	−106
	17	− 4.51	−2.89	−0.36	+184.8	− 5.5	−13.5	8.24098	−169	− 89
	18	− 7.40	−2.69	+0.20	+179.3	−19.2	−13.7	8.23929	−230	− 61
	19	−10.09			+160.1			8.23699		
		s	s	s	"	"	"			
April	4	− 0.11	+1.08		− 25.3	+14.6		8.20694	+510	
	5	+ 0.97	+0.94	−0.14	− 10.7	+17.5	+ 2.9	8.21204	+603	+ 93
	6	+ 1.91	+0.71	−0.23	+ 6.8	+21.1	+ 3.6	8.21807	+659	+ 56
	7	+ 2.62	+0.42	−0.29	+ 27.9	+25.3	+ 4.2	8.22466	+664	+ 5
	8	+ 3.04	+0.02	−0.40	+ 53.2	+29.2	+ 3.9	8.23130	+617	− 47
	9	+ 3.06	−0.51	−0.53	+ 82.4	+31.6	+ 2.4	8.23747	+513	−104
	10	+ 2.55	−1.22	−0.71	+114.0	+30.8	− 0.8	8.24260	+362	−151
	11	+ 1.33	−2.07	−0.85	+144.8	+25.4	− 5.4	8.24622	+182	−180
	12	− 0.74	−2.94	−0.87	+170.2	+14.6	−10.8	8.24804	− 7	−189
	13	− 3.68	−3.50	−0.56	+184.8	− 0.9	−15.5	8.24797	−179	−172
	14	− 7.18	−3.38	+0.12	+183.9	−17.7	−16.8	8.24618	−319	−140
	15	−10.56	−2.52	+0.86	+166.2	−31.2	−13.5	8.24299	−418	− 99
	16	−13.08	−1.27	+1.25	+135.0	−38.4	− 7.2	8.23881	−472	− 54
	17	−14.35			+ 96.6			8.23409		
		s	s	s	"	"	"			
Mai	4	+ 3.14	+0.84		+ 19.7	+20.2		8.21745	+685	
	5	+ 3.98	+0.49	−0.35	+ 39.9	+24.3	+ 4.1	8.22430	+720	+ 35
	6	+ 4.47	−0.02	−0.51	+ 64.2	+28.2	+ 3.9	8.23150	+701	− 19
	7	+ 4.45	−0.73	−0.71	+ 92.4	+30.6	+ 2.4	8.23851	+619	− 82
	8	+ 3.72	−1.66	−0.93	+123.0	+29.4	− 1.2	8.24470	+474	−145
	9	+ 2.06	−2.78	−1.12	+152.4	+22.6	− 6.8	8.24944	+278	−196
	10	− 0.72	−3.79	−1.01	+175.0	+ 8.7	−13.9	8.25222	+ 54	−224
	11	− 4.51	−4.19	−0.40	+183.7	− 9.9	−18.6	8.25276	−170	−224
	12	− 8.70	−3.60	+0.59	+173.8	−28.1	−18.2	8.25106	−366	−196
	13	−12.30	−2.28	+1.32	+145.7	−40.1	−12.0	8.24740	−513	−147
	14	−14.58	−0.82	+1.46	+105.6	−43.7	− 3.6	8.24227	−603	− 90
	15	−15.40	+0.27	+1.09	+ 61.9	−40.8	+ 2.9	8.23624	−638	− 35
	16	−15.13	+0.93	+0.66	+ 21.1	−34.4	+ 6.4	8.22986	−625	+ 13
	17	−14.20			− 13.3			8.22361		

Tag		0ʰ Welt-Zeit								
		$\alpha_{☾}-\alpha_k$			$\delta_{☾}-\delta_k$			log sin p_k		
1933		s	s	s	"	"	"			
Juni	2	+ 4.71	+0.57		+ 57.1	+22.8		8.22304	+693	
	3	+ 5.28	+0.01	−0.56	+ 79.9	+25.9	+ 3.1	8.22997	+703	+ 10
	4	+ 5.29	−0.80	−0.81	+105.8	+27.5	+ 1.6	8.23700	+655	− 48
	5	+ 4.49	−1.90	−1.10	+133.3	+25.3	− 2.2	8.24355	+543	−112
	6	+ 2.59	−3.16	−1.26	+158.6	+17.1	− 8.2	8.24898	+371	−172
	7	− 0.57	−4.17	−1.01	+175.7	+ 1.6	−15.5	8.25269	+153	−218
	8	− 4.74	−4.36	−0.19	+177.3	−18.2	−19.8	8.25422	− 87	−240
	9	− 9.10	−3.48	+0.88	+159.1	−35.8	−17.6	8.25335	−315	−228
	10	−12.58	−1.99	+1.49	+123.3	−45.4	− 9.6	8.25020	−504	−189
	11	−14.57	−0.60	+1.39	+ 77.9	−46.0	− 0.6	8.24516	−636	−132
	12	−15.17	+0.36	+0.96	+ 31.9	−40.7	+ 5.3	8.23880	−704	− 68
	13	−14.81	+0.90	+0.54	− 8.8	−32.4	+ 8.3	8.23176	−709	− 5
	14	−13.91	+1.12	+0.22	− 41.2	−23.6	+ 8.8	8.22467	−669	+ 40
	15	−12.79	+1.17	+0.05	− 64.8	−15.5	+ 8.1	8.21798	−593	+ 76
	16	−11.62			− 80.3			8.21205		
		s	s	s	"	"	"			
Juli	1	+ 5.23	−0.07		+101.0	+23.0		8.22848	+617	
	2	+ 5.16	−0.93	−0.86	+124.0	+22.9	− 0.1	8.23465	+594	− 23
	3	+ 4.23	−2.05	−1.12	+146.9	+18.8	− 4.1	8.24059	+521	− 73
	4	+ 2.18	−3.24	−1.19	+165.7	+ 8.9	− 9.9	8.24580	+393	−128
	5	− 1.06	−4.04	−0.80	+174.6	− 7.1	−16.0	8.24973	+216	−177
	6	− 5.10	−3.94	+0.10	+167.5	−25.6	−18.5	8.25189	+ 3	−213
	7	− 9.04	−2.94	+1.00	+141.9	−40.3	−14.7	8.25192	−218	−221
	8	−11.98	−1.59	+1.35	+101.6	−47.1	− 6.8	8.24974	−420	−202
	9	−13.57	−0.45	+1.14	+ 54.5	−45.8	+ 1.3	8.24554	−578	−158
	10	−14.02	+0.31	+0.76	+ 8.7	−39.1	+ 6.7	8.23976	−676	− 98
	11	−13.71	+0.71	+0.40	− 30.4	−30.2	+ 8.9	8.23300	−713	− 37
	12	−13.00	+0.88	+0.17	− 60.6	−20.7	+ 9.5	8.22587	−693	+ 20
	13	−12.12	+0.91	+0.03	− 81.3	−12.0	+ 8.7	8.21894	−627	+ 66
	14	−11.21	+0.88	−0.03	− 93.3	− 4.3	+ 7.7	8.21267	−530	+ 97
	15	−10.33			− 97.6			8.20737		
		s	s	s	"	"	"			
Juli	31	+ 2.65	−2.27		+161.9	+ 9.9		8.23780	+402	
Aug.	1	+ 0.38	−3.14	−0.87	+171.8	− 1.7	−11.6	8.24182	+317	− 85
	2	− 2.76	−3.47	−0.33	+170.1	−17.0	−15.3	8.24499	+192	−125
	3	− 6.23	−3.02	+0.45	+153.1	−31.9	−14.9	8.24691	+ 32	−160
	4	− 9.25	−2.05	+0.97	+121.2	−42.2	−10.3	8.24723	−144	−176
	5	−11.30	−1.00	+1.05	+ 79.0	−45.5	− 3.3	8.24579	−320	−176
	6	−12.30	−0.20	+0.80	+ 33.5	−42.8	+ 2.7	8.24259	−472	−152
	7	−12.50	+0.28	+0.48	− 9.3	−35.9	+ 6.9	8.23787	−582	−110

Tag	0^h Welt-Zeit $\alpha_{☾} - \alpha_k$			$\delta_{☾} - \delta_k$			$\log \sin p_k$		
1933	s	s	s	"	"	"			
Aug. 7	−12.50	+0.28	+0.48	− 9.3	−35.9	+ 6.9	8.23787	−582	−110
8	−12.22	+0.53	+0.25	− 45.2	−26.9	+ 9.0	8.23205	−642	− 60
9	−11.69	+0.62	+0.09	− 72.1	−17.7	+ 9.2	8.22563	−648	− 6
10	−11.07	+0.64	+0.02	− 89.8	− 8.7	+ 9.0	8.21915	−606	+ 42
11	−10.43	+0.64	0.00	− 98.5	− 1.0	+ 7.7	8.21309	−521	+ 85
12	− 9.79	+0.64	0.00	− 99.5	+ 5.5	+ 6.5	8.20788	−410	+111
13	− 9.15			− 94.0			8.20378		
	s	s	s	"	"	"			
Aug. 29	− 2.77	−2.86		+171.9	−14.0		8.23903	+150	
30	− 5.63	−2.60	+0.26	+157.9	−26.9	−12.9	8.24053	+ 71	− 79
31	− 8.23	−1.85	+0.75	+131.0	−36.7	− 9.8	8.24124	− 29	−100
Sept. 1	−10.08	−1.00	+0.85	+ 94.3	−41.6	− 4.9	8.24095	−144	−115
2	−11.08	−0.29	+0.71	+ 52.7	−41.5	+ 0.1	8.23951	−265	−121
3	−11.37	+0.15	+0.44	+ 11.2	−37.4	+ 4.1	8.23686	−380	−115
4	−11.22	+0.38	+0.23	− 26.2	−30.5	+ 6.9	8.23306	−471	− 91
5	−10.84	+0.46	+0.08	− 56.7	−22.3	+ 8.2	8.22835	−532	− 61
6	−10.38	+0.46	0.00	− 79.0	−13.5	+ 8.8	8.22303	−551	− 19
7	− 9.92	+0.45	−0.01	− 92.5	− 5.2	+ 8.3	8.21752	−531	+ 20
8	− 9.47	+0.45	0.00	− 97.7	+ 2.3	+ 7.5	8.21221	−469	+ 62
9	− 9.02	+0.52	+0.07	− 95.4	+ 8.5	+ 6.2	8.20752	−375	+ 94
10	− 8.50	+0.68	+0.16	− 86.9	+13.4	+ 4.9	8.20377	−256	+119
11	− 7.82	+0.91	+0.23	− 73.5	+16.4	+ 3.0	8.20121	−122	+134
12	− 6.91			− 57.1			8.19999		
	s	s	s	"	"	"			
Sept. 27	− 9.00	−1.62		+134.6	−35.3		8.23821	−122	
28	−10.62	−0.75	+0.87	+ 99.3	−39.4	− 4.1	8.23699	−175	− 53
29	−11.37	−0.07	+0.68	+ 59.9	−39.2	+ 0.2	8.23524	−232	− 57
30	−11.44	+0.36	+0.43	+ 20.7	−35.8	+ 3.4	8.23292	−289	− 57
Okt. 1	−11.08	+0.53	+0.17	− 15.1	−30.3	+ 5.5	8.23003	−346	− 57
2	−10.55	+0.55	+0.02	− 45.4	−23.5	+ 6.8	8.22657	−395	− 49
3	−10.00	+0.50	−0.05	− 68.9	−16.0	+ 7.5	8.22262	−429	− 34
4	− 9.50	+0.42	−0.08	− 84.9	− 8.1	+ 7.9	8.21833	−442	− 13
5	− 9.08	+0.37	−0.05	− 93.0	− 0.7	+ 7.4	8.21391	−427	+ 15
6	− 8.71	+0.39	+0.02	− 93.7	+ 6.2	+ 6.9	8.20964	−384	+ 43
7	− 8.32	+0.52	+0.13	− 87.5	+11.7	+ 5.5	8.20580	−311	+ 73
8	− 7.80	+0.77	+0.25	− 75.8	+15.6	+ 3.9	8.20269	−213	+ 98
9	− 7.03	+1.08	+0.31	− 60.2	+17.9	+ 2.3	8.20056	− 92	+121
10	− 5.95	+1.38	+0.30	− 42.3	+18.4	+ 0.5	8.19964	+ 42	+134
11	− 4.57			− 23.9			8.20006		

Mondkrater Mösting A. 1933

Tag		0ʰ Welt-Zeit								
		$\alpha_{☾} - \alpha_k$			$\delta_{☾} - \delta_k$			log sin p_k		
1933		s	s	s	"	"	"			
Okt.	27	−12.66	+0.54		+ 20.4	−35.7		8.23194	−385	
	28	−12.12	+0.77	+0.23	− 15.3	−29.5	+ 6.2	8.22809	−390	− 5
	29	−11.35	+0.79	+0.02	− 44.8	−22.9	+ 6.6	8.22419	−387	+ 3
	30	−10.56	+0.70	−0.09	− 67.7	−15.7	+ 7.2	8.22032	−381	+ 6
	31	− 9.86	+0.58	−0.12	− 83.4	− 8.6	+ 7.1	8.21651	−371	+ 10
Nov.	1	− 9.28	+0.45	−0.13	− 92.0	− 1.6	+ 7.0	8.21280	−358	+ 13
	2	− 8.83	+0.39	−0.06	− 93.6	+ 4.9	+ 6.5	8.20922	−330	+ 28
	3	− 8.44	+0.45	+0.06	− 88.7	+10.7	+ 5.8	8.20592	−290	+ 40
	4	− 7.99	+0.64	+0.19	− 78.0	+15.2	+ 4.5	8.20302	−230	+ 60
	5	− 7.35	+0.97	+0.33	− 62.8	+18.1	+ 2.9	8.20072	−152	+ 78
	6	− 6.38	+1.31	+0.34	− 44.7	+19.0	+ 0.9	8.19920	− 54	+ 98
	7	− 5.07	+1.61	+0.30	− 25.7	+18.5	− 0.5	8.19866	+ 62	+116
	8	− 3.46	+1.77	+0.16	− 7.2	+17.5	− 1.0	8.19928	+187	+125
	9	− 1.69	+1.79	+0.02	+ 10.3	+16.3	− 1.2	8.20115	+321	+134
	10	+ 0.10			+ 26.6			8.20436		
		s	s	s	"	"	"			
Nov.	26	−11.85	+0.84		− 74.0	−15.8		8.22105	−487	
	27	−11.01	+0.72	−0.12	− 89.8	− 8.2	+ 7.6	8.21618	−430	+ 57
	28	−10.29	+0.59	−0.13	− 98.0	− 1.3	+ 6.9	8.21188	−374	+ 56
	29	− 9.70	+0.49	−0.10	− 99.3	+ 5.3	+ 6.6	8.20814	−320	+ 54
	30	− 9.21	+0.48	−0.01	− 94.0	+11.0	+ 5.7	8.20494	−263	+ 57
Dez.	1	− 8.73	+0.60	+0.12	− 83.0	+15.6	+ 4.6	8.20231	−207	+ 56
	2	− 8.13	+0.87	+0.27	− 67.4	+18.9	+ 3.3	8.20024	−150	+ 57
	3	− 7.26	+1.22	+0.35	− 48.5	+20.3	+ 1.4	8.19874	− 82	+ 68
	4	− 6.04	+1.56	+0.34	− 28.2	+20.1	− 0.2	8.19792	− 3	+ 79
	5	− 4.48	+1.81	+0.25	− 8.1	+18.8	− 1.3	8.19789	+ 85	+ 88
	6	− 2.67	+1.90	+0.09	+ 10.7	+17.0	− 1.8	8.19874	+189	+104
	7	− 0.77	+1.87	−0.03	+ 27.7	+15.5	− 1.5	8.20063	+301	+112
	8	+ 1.10	+1.73	−0.14	+ 43.2	+14.8	− 0.7	8.20364	+417	+116
	9	+ 2.83	+1.48	−0.25	+ 58.0	+15.0	+ 0.2	8.20781	+531	+114
	10	+ 4.31			+ 73.0			8.21312		
		s	s	s	"	"	"			
Dez.	25	−11.49	+0.57		−107.1	− 1.7		8.21499	−515	
	26	−10.92	+0.51	−0.06	−108.8	+ 5.5	+ 7.2	8.20984	−421	+ 94
	27	−10.41	+0.50	−0.01	−103.3	+11.6	+ 6.1	8.20563	−326	+ 95
	28	− 9.91	+0.60	+0.10	− 91.7	+16.6	+ 5.0	8.20237	−236	+ 90
	29	− 9.31	+0.84	+0.24	− 75.1	+20.1	+ 3.5	8.20001	−154	+ 82
	30	− 8.47	+1.15	+0.31	− 55.0	+21.9	+ 1.8	8.19847	− 78	+ 76
	31	− 7.32			− 33.1			8.19769		

Verfinsterungen: E. Eintritte, A. Austritte (in Welt-Zeit)

TRABANT I

		h	m	
Jan.	0	17	10.4	E.
	2	11	38.6	E.
	4	6	6.8	E.
	6	0	35.1	E.
	7	19	3.3	E.
	9	13	31.5	E.
	11	7	59.8	E.
	13	2	28.0	E.
	14	20	56.3	E.
	16	15	24.5	E.
	18	9	52.8	E.
	20	4	21.0	E.
	21	22	49.3	E.
	23	17	17.6	E.
	25	11	45.8	E.
	27	6	14.1	E.
	29	0	42.4	E.
	30	19	10.7	E.
Febr.	1	13	39.0	E.
	3	8	7.3	E.
	5	2	35.7	E.
	6	21	4.0	E.
	8	15	32.3	E.
	10	10	0.6	E.
	12	4	29.0	E.
	13	22	57.3	E.
	15	17	25.7	E.
	17	11	54.1	E.
	19	6	22.5	E.
	21	0	50.9	E.
	22	19	19.3	E.
	24	13	47.7	E.
	26	8	16.2	E.
	28	2	44.6	E.
März	1	21	13.1	E.
	3	15	41.5	E.
	5	10	10.0	E.
	7	4	38.4	E.
	8	23	6.9	E.
	10	19	51.0	A.
	12	14	19.6	A.
	14	8	48.0	A.
	16	3	16.6	A.
	17	21	45.1	A.
	19	16	13.7	A.
	21	10	42.2	A.
	23	5	10.8	A.

TRABANT I

		h	m	
März	24	23	39.3	A.
	26	18	7.9	A.
	28	12	36.5	A.
	30	7	5.1	A.
April	1	1	33.7	A.
	2	20	2.4	A.
	4	14	30.9	A.
	6	8	59.6	A.
	8	3	28.2	A.
	9	21	56.9	A.
	11	16	25.5	A.
	13	10	54.3	A.
	15	5	22.9	A.
	16	23	51.6	A.
	18	18	20.3	A.
	20	12	49.0	A.
	22	7	17.7	A.
	24	1	46.4	A.
	25	20	15.1	A.
	27	14	43.9	A.
	29	9	12.6	A.
Mai	1	3	41.4	A.
	2	22	10.1	A.
	4	16	38.8	A.
	6	11	7.5	A.
	8	5	36.3	A.
	10	0	5.1	A.
	11	18	33.9	A.
	13	13	2.6	A.
	15	7	31.4	A.
	17	2	0.2	A.
	18	20	29.0	A.
	20	14	57.7	A.
	22	9	26.6	A.
	24	3	55.3	A.
	25	22	24.2	A.
	27	16	52.9	A.
	29	11	21.8	A.
	31	5	50.5	A.
Juni	2	0	19.4	A.
	3	18	48.1	A.
	5	13	17.0	A.
	7	7	45.7	A.
	9	2	14.6	A.
	10	20	43.3	A.
	12	15	12.2	A.
	14	9	41.0	A.

TRABANT I

		h	m	
Juni	16	4	9.8	A.
	17	22	38.6	A.
	19	17	7.4	A.
	21	11	36.2	A.
	23	6	5.1	A.
	25	0	33.8	A.
	26	19	2.7	A.
	28	13	31.4	A.
	30	8	0.3	A.
Juli	2	2	29.0	A.
	3	20	57.8	A.
	5	15	26.6	A.
	7	9	55.4	A.
	9	4	24.1	A.
	10	22	53.0	A.
	12	17	21.7	A.
	14	11	50.6	A.
	16	6	19.2	A.
	18	0	48.1	A.
	19	19	16.8	A.
	21	13	45.6	A.
	23	8	14.3	A.
	25	2	43.2	A.
	26	21	11.9	A.
	28	15	40.7	A.
	30	10	9.3	A.
Aug.	1	4	38.1	A.
	2	23	6.8	A.
	4	17	35.6	A.
	6	12	4.3	A.
	8	6	33.0	A.
	10	1	1.7	A.
	11	19	30.5	A.
	13	13	59.1	A.
	15	8	27.9	A.
Okt.	14	10	25.9	E.
	16	4	54.4	E.
	17	23	22.9	E.
	19	17	51.3	E.
	21	12	19.8	E.
	23	6	48.2	E.
	25	1	16.7	E.
	26	19	45.1	E.
	28	14	13.6	E.
	30	8	42.0	E.
Nov.	1	3	10.4	E.
	2	21	38.8	E.

TRABANT I

		h	m	
Nov.	4	16	7.2	E.
	6	10	35.6	E.
	8	5	4.0	E.
	9	23	32.3	E.
	11	18	0.8	E.
	13	12	29.1	E.
	15	6	57.5	E.
	17	1	25.8	E.
	18	19	54.2	E.
	20	14	22.5	E.
	22	8	50.9	E.
	24	3	19.2	E.
	25	21	47.5	E.
	27	16	15.8	E.
	29	10	44.1	E.
Dez.	1	5	12.4	E.
	2	23	40.7	E.
	4	18	9.0	E.
	6	12	37.3	E.
	8	7	5.6	E.
	10	1	33.9	E.
	11	20	2.1	E.
	13	14	30.4	E.
	15	8	58.6	E.
	17	3	26.9	E.
	18	21	55.1	E.
	20	16	23.4	E.
	22	10	51.6	E.
	24	5	19.9	E.
	25	23	48.2	E.
	27	18	16.4	E.
	29	12	44.6	E.
	31	7	12.9	E.

TRABANT II

		h	m	
Jan.	0	19	21.7	E.
	4	8	39.1	E.
	7	21	57.5	E.
	11	11	15.0	E.
	15	0	33.3	E.
	18	13	50.8	E.
	22	3	9.1	E.
	25	16	26.6	E.
	29	5	44.9	E.
Febr.	1	19	2.4	E.
	5	8	20.6	E.

Jupitertrabanten 1933

Verfinsterungen: E. Eintritte, A. Austritte (in Welt-Zeit)

TRABANT II

	h	m	
Febr. 8	21	38.2	E.
12	10	56.3	E.
16	0	13.9	E.
19	13	32.0	E.
23	2	49.6	E.
26	16	7.7	E.
März 2	5	25.3	E.
5	18	43.4	E.
9	8	1.0	E.
9	10	42.9	A.
13	0	0.7	A.
16	13	18.1	A.
20	2	35.9	A.
23	15	53.4	A.
27	5	11.1	A.
30	18	28.6	A.
April 3	7	46.3	A.
6	21	3.7	A.
10	10	21.4	A.
13	23	38.8	A.
17	12	56.4	A.
21	2	13.9	A.
24	15	31.4	A.
28	4	48.9	A.
Mai 1	18	6.4	A.
5	7	23.8	A.
8	20	41.2	A.
12	9	58.6	A.
15	23	16.0	A.
19	12	33.4	A.
23	1	50.7	A.
26	15	8.1	A.
30	4	25.4	A.
Juni 2	17	42.7	A.
6	6	59.9	A.
9	20	17.2	A.
13	9	34.4	A.
16	22	51.6	A.
20	12	8.8	A.
24	1	26.0	A.
27	14	43.1	A.
Juli 1	4	0.2	A.
4	17	17.3	A.
8	6	34.4	A.
11	19	51.5	A.
15	9	8.6	A.
18	22	25.7	A.

TRABANT II

	h	m	
Juli 22	11	42.8	A.
26	0	59.8	A.
29	14	16.8	A.
Aug. 2	3	33.9	A.
5	16	50.9	A.
9	6	7.9	A.
12	19	24.9	A.
16	8	42.0	A.
Okt. 15	15	59.8	E.
19	5	16.9	E.
22	18	34.2	E.
26	7	51.4	E.
29	21	8.8	E.
Nov. 2	10	26.0	E.
5	23	43.4	E.
9	13	0.6	E.
13	2	18.1	E.
16	15	35.3	E.
20	4	52.9	E.
23	18	10.1	E.
27	7	27.8	E.
30	20	45.0	E.
Dez. 4	10	2.7	E.
7	23	20.0	E.
11	12	37.8	E.
15	1	55.1	E.
18	15	13.0	E.
22	4	30.2	E.
25	17	48.2	E.
29	7	5.5	E.

TRABANT III

	h	m	
Jan. 2	18	37.5	E.
2	21	56.5	A.
9	22	34.7	E.
10	1	52.9	A.
17	2	31.8	E.
17	5	49.3	A.
24	6	29.6	E.
24	9	46.4	A.
31	10	27.5	E.
31	13	43.6	A.
Febr. 7	14	26.2	E.
14	18	24.4	E.

TRABANT III

	h	m	
Febr. 21	22	22.4	E.
März 1	2	20.3	E.
8	6	18.3	E.
15	13	28.3	A.
22	17	26.4	A.
29	21	25.2	A.
April 6	1	23.5	A.
13	2	13.8	E.
13	5	21.7	A.
20	6	12.6	E.
20	9	19.6	A.
27	10	11.5	E.
27	13	17.6	A.
Mai 4	14	11.1	E.
4	17	16.4	A.
11	18	10.8	E.
11	21	15.1	A.
18	22	11.1	E.
19	1	14.6	A.
26	2	10.9	E.
26	5	13.4	A.
Juni 2	6	10.4	E.
2	9	12.1	A.
9	10	9.6	E.
9	13	10.4	A.
16	14	8.9	E.
16	17	8.8	A.
23	18	8.8	E.
23	21	7.7	A.
30	22	8.7	E.
Juli 1	1	6.6	A.
8	2	9.0	E.
8	5	6.0	A.
15	6	8.7	E.
15	9	4.7	A.
22	10	8.1	E.
22	13	3.1	A.
29	14	7.2	E.
29	17	1.3	A.
Aug. 5	18	6.2	E.
5	20	59.3	A.
13	0	58.0	A.
Okt. 16	9	56.5	E.
23	13	54.8	E.
30	17	52.8	E.
Nov. 6	21	50.5	E.
14	1	48.1	E.

TRABANT III

	h	m	
Nov. 14	4	27.2	A.
21	5	46.3	E.
21	8	24.4	A.
28	9	44.2	E.
28	12	21.4	A.
Dez. 5	13	42.6	E.
5	16	18.8	A.
12	17	40.2	E.
12	20	15.4	A.
19	21	37.7	E.
20	0	11.8	A.
27	1	34.7	E.
27	4	7.9	A.

TRABANT IV

	h	m	
Jan. 10	8	10.5	E.
10	12	7.7	A.
27	2	10.5	E.
27	6	1.2	A.
Febr. 12	20	11.0	E.
12	23	54.6	A.
März 1	14	12.7	E.
18	11	43.3	A.
April 4	2	17.6	E.
4	5	37.7	A.
20	20	21.9	E.
20	23	32.9	A.
Mai 7	14	26.4	E.
7	17	27.7	A.
24	8	31.3	E.
24	11	22.3	A.
Juni 10	2	37.4	E.
10	5	17.0	A.
26	20	43.3	E.
26	23	10.7	A.
Juli 13	14	49.3	E.
13	17	3.2	A.
30	8	56.5	E.
30	10	55.3	A.
Aug. 16	3	4.1	E.
16	4	45.4	A.

0h Welt-Zeit	α	β	p_α	a	b	U′	B′	P′
1933	″	″	″	″	″	°	°	°
Jan. −2	15.41	14.00	+0.01	34.70	+11.80	141.449	+19.007	+21.606
+2	15.37	13.96	+0.01	34.61	11.68	141.572	18.967	21.645
6	15.33	13.92	0.00	34.53	11.56	141.694	18.926	21.683
10	15.30	13.89	0.00	34.47	11.45	141.817	18.886	21.722
14	15.28	13.87	0.00	34.42	11.34	141.940	18.845	21.760
18	15.26	13.85	0.00	34.38	+11.23	142.063	+18.804	+21.798
22	15.25	13.84	0.00	34.36	11.13	142.185	18.763	21.836
26	15.25	13.84	0.00	34.35	11.03	142.307	18.722	21.874
30	15.25	13.84	0.00	34.35	10.93	142.429	18.681	21.912
Febr. 3	15.26	13.84	0.00	34.36	10.83	142.551	18.640	21.950
7	15.27	13.84	0.00	34.39	+10.74	142.673	+18.599	+21.988
11	15.29	13.85	0.00	34.43	10.65	142.795	18.558	22.026
15	15.32	13.87	0.00	34.48	10.57	142.917	18.517	22.064
19	15.35	13.90	0.00	34.55	10.49	143.039	18.476	22.101
23	15.38	13.93	−0.01	34.63	10.42	143.161	18.434	22.138
27	15.42	13.96	−0.01	34.72	+10.35	143.283	+18.393	+22.175
März 3	15.47	14.00	0.01	34.83	10.28	143.405	18.351	22.212
7	15.52	14.05	0.01	34.95	10.22	143.527	18.309	22.249
11	15.57	14.10	0.01	35.08	10.17	143.649	18.267	22.286
15	15.63	14.15	0.02	35.23	10.12	143.771	18.225	22.323
19	15.70	14.21	−0.02	35.38	+10.08	143.893	+18.183	+22.360
23	15.77	14.27	0.02	35.54	10.04	144.015	18.141	22.397
27	15.85	14.34	0.02	35.71	10.01	144.137	18.099	22.433
31	15.93	14.41	0.03	35.90	9.98	144.259	18.057	22.469
April 4	16.02	14.49	0.03	36.10	9.96	144.380	18.014	22.505
8	16.11	14.57	−0.03	36.30	+ 9.95	144.502	+17.972	+22.541
12	16.21	14.65	0.03	36.51	9.94	144.623	17.929	22.577
16	16.31	14.74	0.04	36.73	9.94	144.745	17.887	22.613
20	16.41	14.83	0.04	36.96	9.95	144.866	17.844	22.649
24	16.52	14.93	0.04	37.20	9.96	144.988	17.801	22.685
28	16.62	15.02	−0.04	37.44	+ 9.98	145.109	+17.758	+22.720
Mai 2	16.73	15.12	0.04	37.69	10.01	145.231	17.715	22.755
6	16.85	15.22	0.04	37.94	10.04	145.352	17.672	22.790
10	16.96	15.33	0 04	38.20	10.08	145.473	17.629	22.825
14	17.08	15.43	0.04	38.46	10.13	145.594	17.586	22.860
18	17.20	15.53	−0.04	38.72	+10.18	145.716	+17.543	+22.895
22	17.31	15.64	0.04	38.98	10.24	145.837	17.500	22.930
26	17.43	15.74	0.04	39.25	10.31	145.958	17.457	22.965
30	17.54	15.84	0.04	39.51	10.39	146.079	17.414	23.000
Juni 3	17.65	15.94	0.04	39.76	10.47	146.200	17.370	23.035
7	17.76	16.04	−0.04	40.01	+10.56	146.321	+17.326	+23.069
11	17.87	16.14	0.03	40.25	10.66	146.442	17.282	23.103
15	17.98	16.24	0.03	40.49	10.76	146.563	17.238	23.137
19	18.08	16.33	0.03	40.72	10.87	146.684	17.194	23.171
23	18.18	16.42	0.02	40.94	10.98	146.805	17.150	23.205
27	18.27	16.50	0.02	41.14	11.09	146.926	17.106	23.239
Juli 1	18.35	16.58	−0.02	41.33	+11.20	147.047	+17.062	+23.273

Saturn und Saturnsring 1933

0h Welt-Zeit	α	β	p_α	a	b	U′	B′	P′
1933	"	"	"	"	"	°	°	°
Juli 1	18.35	16.58	−0.02	41.33	+11.20	147.047	+17.062	+23.273
5	18.43	16.65	0.01	41.50	11.31	147.167	17.018	23.307
9	18.50	16.72	0.01	41.66	11.43	147.288	16.974	23.341
13	18.56	16.78	0.01	41.80	11.54	147.408	16.930	23.374
17	18.61	16.83	−0.01	41.92	11.65	147.529	16.885	23.407
21	18.65	16.87	0.00	42.02	+11.76	147.649	+16.841	+23.440
25	18.68	16.90	0.00	42.10	11.87	147.770	16.796	23.473
29	18.71	16.93	0.00	42.16	11.97	147.890	16.752	23.506
Aug. 2	18.73	16.95	0.00	42.19	12.07	148.011	16.707	23.539
6	18.73	16.95	0.00	42.20	12.16	148.131	16.662	23.572
10	18.72	16.95	0.00	42.19	+12.24	148.252	+16.617	+23.605
14	18.71	16.94	0.00	42.16	12.32	148.372	16.572	23.637
18	18.69	16.92	0.00	42.10	12.39	148.493	16.527	23.669
22	18.65	16.89	0.00	42.02	12.44	148.613	16.482	23.701
26	18.61	16.85	+0.01	41.92	12.49	148.733	16.437	23.733
30	18.56	16.80	+0.01	41.80	+12.53	148.854	+16.392	+23.765
Sept. 3	18.50	16.75	0.01	41.66	12.56	148.974	16.347	23.797
7	18.43	16.69	0.01	41.50	12.57	149.094	16.301	23.829
11	18.35	16.62	0.02	41.33	12.57	149.214	16.256	23.861
15	18.27	16.55	0.02	41.14	12.57	149.334	16.210	23.893
19	18.18	16.47	+0.02	40.94	+12.56	149.454	+16.164	+23.924
23	18.09	16.38	0.03	40.72	12.53	149.574	16.119	23.955
27	17.99	16.29	0.03	40.49	12.49	149.694	16.073	23.986
Okt. 1	17.88	16.19	0.03	40.25	12.45	149.814	16.027	24.017
5	17.77	16.10	0.03	40.01	12.40	149.934	15.981	24.048
9	17.66	16.00	+0.04	39.76	+12.33	150.054	+15.935	+24.079
13	17.55	15.90	0.04	39.50	12.26	150.174	15.889	24.110
17	17.43	15.79	0.04	39.24	12.18	150.294	15.843	24.141
21	17.31	15.69	0.04	38.98	12.09	150.413	15.797	24.172
25	17.19	15.58	0.04	38.72	11.99	150.533	15.751	24.203
29	17.07	15.48	+0.04	38.46	+11.89	150.653	+15.705	+24.233
Nov. 2	16.95	15.37	0.04	38.20	11.78	150.772	15.659	24.263
6	16.84	15.27	0.04	37.94	11.67	150.892	15.613	24.293
10	16.73	15.17	0.04	37.69	11.55	151.012	15.566	24.323
14	16.62	15.07	0.04	37.44	11.43	151.131	15.519	24.353
18	16.51	14.97	+0.04	37.20	+11.30	151.251	+15.472	+24.383
22	16.41	14.87	0.04	36.97	11.17	151.370	15.425	24.413
26	16.31	14.78	0.03	36.75	11.04	151.490	15.378	24.443
30	16.21	14.69	0.03	36.53	10.91	151.609	15.331	24.473
Dez. 4	16.12	14.60	0.03	36.32	10.77	151.729	15.284	24.502
8	16.04	14.52	+0.03	36.12	+10.64	151.848	+15.237	+24.531
12	15.96	14.44	0.02	35.93	10.51	151.968	15.190	24.560
16	15.88	14.36	0.02	35.75	10.37	152.087	15.143	24.589
20	15.80	14.29	0.02	35.59	10.23	152.206	15.096	24.618
24	15.73	14.23	0.02	35.44	10.09	152.325	15.048	24.647
28	15.67	14.17	0.02	35.30	9.96	152.445	15.001	24.676
32	15.61	14.12	+0.01	35.17	+ 9.82	152.564	+14.953	+24.705

0^h Welt-Zeit	*U*		*B*		*P*	
1933	°		°		°	
Jan. 0	181.077		+19.804		+7.209	
2	181.301	224	19.725	79	7.206	3
4	181.527	226	19.645	80	7.203	3
6	181.754	227	19.565	80	7.200	3
8	181.983	229	19.484	81	7.197	3
10	182.213	230	+19.402	82	+7.193	4
12	182.444	231	19.319	83	7.190	3
14	182.677	233	19.235	84	7.186	4
16	182.910	233	19.151	84	7.182	4
18	183.144	234	19.066	85	7.178	4
20	183.378	234	+18.981	85	+7.173	5
22	183.613	235	18.895	86	7.169	4
24	183.848	235	18.809	86	7.165	4
26	184.083	235	18.722	87	7.160	5
28	184.318	235	18.635	87	7.155	5
30	184.553	235	+18.548	87	+7.150	5
Febr. 1	184.787	234	18.461	87	7.145	5
3	185.021	234	18.374	87	7.140	5
5	185.254	233	18.286	88	7.135	5
7	185.486	232	18.199	87	7.130	5
9	185.717	231	+18.112	87	+7.125	5
11	185.947	230	18.025	87	7.119	6
13	186.176	229	17.938	87	7.114	5
15	186.403	227	17.851	87	7.108	6
17	186.629	226	17.765	86	7.103	5
19	186.853	224	+17.679	86	+7.097	6
21	187.075	222	17.593	86	7.091	6
23	187.295	220	17.508	85	7.085	6
25	187.513	218	17.424	84	7.079	6
27	187.729	216	17.340	84	7.073	6
März 1	187.943	214	+17.257	83	+7.067	6
3	188.154	211	17.175	82	7.061	6
5	188.362	208	17.094	81	7.055	6
7	188.568	206	17.014	80	7.049	6
9	188.771	203	16.935	79	7.043	6
11	188.970	199	+16.856	79	+7.037	6
13	189.166	196	16.779	77	7.031	6
15	189.359	193	16.703	76	7.025	6
17	189.549	190	16.628	75	7.019	6
19	189.735	186	16.555	73	7.013	6
21	189.917	182	+16.483	72	+7.007	6
23	190.096	179	16.413	70	7.001	6
25	190.271	175	16.344	69	6.995	6
27	190.442	171	16.276	68	6.990	5
29	190.609	167	16.210	66	6.984	6
31	190.771	162	16.146	64	6.979	5
April 2	190.929	158	+16.084	62	+6.973	6

0^h Welt-Zeit	*U*		*B*		*P*	
1933	°		°		°	
April 2	190.929		+16.084		+6.973	
4	191.083	154	16.023	61	6.968	5
6	191.232	149	15.964	59	6.963	5
8	191.376	144	15.907	57	6.958	5
10	191.516	140	15.852	55	6.953	5
12	191.651	135	+15.800	52	+6.948	5
14	191.781	130	15.750	50	6.944	4
16	191.906	125	15.702	48	6.939	5
18	192.025	119	15.655	47	6.935	4
20	192.139	114	15.610	45	6.931	4
22	192.248	109	+15.568	42	+6.927	4
24	192.351	103	15.528	40	6.923	4
26	192.449	98	15.491	37	6.919	4
28	192.541	92	15.456	35	6.916	3
30	192.628	87	15.424	32	6.913	3
Mai 2	192.709	81	+15.394	30	+6.910	3
4	192.784	75	15.367	27	6.907	3
6	192.853	69	15.342	25	6.905	2
8	192.917	64	15.320	22	6.903	2
10	192.974	57	15.301	19	6.901	2
12	193.025	51	+15.284	17	+6.899	2
14	193.070	45	15.270	14	6.897	2
16	193.109	39	15.259	11	6.896	1
18	193.142	33	15.250	9	6.895	1
20	193.169	27	15.244	6	6.894	1
22	193.189	20	+15.240	4	+6.893	1
24	193.204	15	15.240	0	6.893	0
26	193.212	8	15.242	2	6.893	0
28	193.214	2	15.247	5	6.893	0
30	193.210	4	15.254	7	6.893	0
Juni 1	193.200	10	+15.264	10	+6.893	0
3	193.183	17	15.277	13	6.894	1
5	193.161	22	15.293	16	6.895	1
7	193.133	28	15.311	18	6.896	1
9	193.098	35	15.331	20	6.898	2
11	193.058	40	+15.354	23	+6.900	2
13	193.012	46	15.380	26	6.902	2
15	192.960	52	15.408	28	6.904	2
17	192.902	58	15.439	31	6.906	2
19	192.839	63	15.472	33	6.909	3
21	192.771	68	+15.507	35	+6.912	3
23	192.697	74	15.544	37	6.915	3
25	192.618	79	15.583	39	6.918	3
27	192.533	85	15.625	42	6.922	4
29	192.444	89	15.669	44	6.925	3
Juli 1	192.350	94	15.715	46	6.929	4
3	192.251	99	+15.762	47	+6.933	4

Saturn und Saturnsring 1933

0^h Welt-Zeit		*U*	Δ	*B*	Δ	*P*	Δ
1933		°		°		°	
Juli	3	192.251		+15.762		+6.933	
	5	192.148	103	15.811	49	6.937	4
	7	192.041	107	15.862	51	6.942	5
	9	191.930	111	15.915	53	6.946	4
	11	191.815	115	15.969	54	6.950	4
	13	191.697	118	+16.024	55	+6.955	5
	15	191.575	122	16.081	57	6.959	4
	17	191.450	125	16.139	58	6.964	5
	19	191.322	128	16.198	59	6.968	4
	21	191.191	131	16.258	60	6.973	5
	23	191.058	133	+16.319	61	+6.978	5
	25	190.923	135	16.380	61	6.983	5
	27	190.786	137	16.442	62	6.988	5
	29	190.648	138	16.504	62	6.993	5
	31	190.508	140	16.567	63	6.999	6
Aug.	2	190.367	141	+16.629	62	+7.004	5
	4	190.225	142	16.691	62	7.009	5
	6	190.083	142	16.753	62	7.014	5
	8	189.941	142	16.815	62	7.019	5
	10	189.799	142	16.877	62	7.023	4
	12	189.658	141	+16.939	62	+7.028	5
	14	189.517	141	17.000	61	7.032	4
	16	189.377	140	17.060	60	7.037	5
	18	189.238	139	17.119	59	7.041	4
	20	189.101	137	17.177	58	7.045	4
	22	188.966	135	+17.234	57	+7.050	5
	24	188.833	133	17.290	56	7.054	4
	26	188.703	130	17.346	56	7.058	4
	28	188.575	128	17.400	54	7.062	4
	30	188.450	125	17.452	52	7.066	4
Sept.	1	188.329	121	+17.502	50	+7.070	4
	3	188.211	118	17.551	49	7.073	3
	5	188.097	114	17.598	47	7.076	3
	7	187.987	110	17.643	45	7.080	4
	9	187.881	106	17.687	44	7.083	3
	11	187.780	101	+17.729	42	+7.086	3
	13	187.684	96	17.769	40	7.089	3
	15	187.592	92	17.806	37	7.091	2
	17	187.505	87	17.841	35	7.094	3
	19	187.423	82	17.874	33	7.096	2
	21	187.347	76	+17.905	31	+7.098	2
	23	187.276	71	17.933	28	7.100	2
	25	187.211	65	17.959	26	7.102	2
	27	187.152	59	17.982	23	7.103	1
	29	187.099	53	18.003	21	7.104	1
Okt.	1	187.052	47	18.021	18	7.106	2
	3	187.011	41	+18.037	16	+7.107	1

0^h Welt-Zeit		*U*	Δ	*B*	Δ	*P*	Δ
1933		°		°		°	
Okt.	1	187.052		+18.021		+7.106	
	3	187.011	41	18.037	16	7.107	1
	5	186.976	35	18.050	13	7.108	1
	7	186.948	28	18.061	11	7.108	0
	9	186.926	22	18.069	8	7.109	1
	11	186.910	16	+18.075	6	+7.109	0
	13	186.901	9	18.078	3	7.109	0
	15	186.899	2	18.078	0	7.109	0
	17	186.903	4	18.075	3	7.109	0
	19	186.913	10	18.070	5	7.108	1
	21	186.930	17	+18.063	7	+7.108	0
	23	186.954	24	18.053	10	7.108	0
	25	186.984	30	18.040	13	7.107	1
	27	187.021	37	18.024	16	7.106	1
	29	187.064	43	18.006	18	7.105	1
	31	187.114	50	+17.985	21	+7.104	1
Nov.	2	187.170	56	17.962	23	7.102	2
	4	187.233	63	17.936	26	7.100	2
	6	187.302	69	17.908	28	7.098	2
	8	187.377	75	17.877	31	7.096	2
	10	187.458	81	+17.843	34	+7.093	3
	12	187.545	87	17.807	36	7.091	2
	14	187.639	94	17.769	38	7.088	3
	16	187.738	99	17.728	41	7.085	3
	18	187.843	105	17.685	43	7.082	3
	20	187.954	111	+17.640	45	+7.078	4
	22	188.071	117	17.592	48	7.075	3
	24	188.193	122	17.542	50	7.072	3
	26	188.320	127	17.490	52	7.068	4
	28	188.452	132	17.435	55	7.064	4
	30	188.590	138	+17.378	57	+7.060	4
Dez.	2	188.733	143	17.319	59	7.056	4
	4	188.880	147	17.258	61	7.051	5
	6	189.032	152	17.195	63	7.046	5
	8	189.189	157	17.130	65	7.041	5
	10	189.350	161	+17.063	67	+7.036	5
	12	189.515	165	16.994	69	7.031	5
	14	189.685	170	16.923	71	7.025	6
	16	189.859	174	16.851	72	7.019	6
	18	190.037	178	16.777	74	7.013	6
	20	190.218	181	+16.701	76	+7.007	6
	22	190.403	185	16.624	77	7.000	7
	24	190.592	189	16.545	79	6.994	6
	26	190.784	192	16.464	81	6.987	7
	28	190.979	195	16.382	82	6.980	7
	30	191.177	198	16.299	83	6.973	7
	32	191.377	200	+16.214	85	+6.966	7

MIMAS

0^h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		"
April 20	196.953	324.69	1.40114	+6.77
22	240.921	6.66	1.40252	6.78
24	284.889	48.63	1.40392	6.78
26	328.857	90.59	1.40533	6.79
28	12.825	132.56	1.40676	6.80
30	56.793	174.53	1.40819	+6.81
Mai 2	100.761	216.50	1.40964	6.82
4	144.729	258.46	1.41109	6.83
6	188.697	300.43	1.41255	6.84
8	232.665	342.40	1.41402	6.85
10	276.633	24.37	1.41549	+6.86
12	320.601	66.33	1.41696	6.88
14	4.569	108.30	1.41844	6.90
16	48.537	150.27	1.41991	6.92
18	92.505	192.24	1.42138	6.94
20	136.473	234.20	1.42285	+6.96
22	180.441	276.17	1.42432	6.98
24	224.409	318.14	1.42577	7.00
26	268.377	0.11	1.42722	7.02
28	312.345	42.08	1.42865	7.05
30	356.313	84.05	1.43008	+7.08
Juni 1	40.281	126.02	1.43149	7.11
3	84.249	167.99	1.43288	7.14
5	128.217	209.95	1.43425	7.17
7	172.184	251.92	1.43561	7.20
9	216.152	293.89	1.43694	+7.23
11	260.120	335.86	1.43825	7.26
13	304.088	17.82	1.43953	7.29
15	348.056	59.79	1.44079	7.33
17	32.024	101.76	1.44202	7.36
19	75.992	143.73	1.44322	+7.39
21	119.960	185.70	1.44438	7.43
23	163.927	227.67	1.44551	7.47
25	207.895	269.63	1.44661	7.51
27	251.863	311.60	1.44767	7.55
29	295.831	353.57	1.44868	+7.59
Juli 1	339.799	35.54	1.44966	7.63
3	23.767	77.51	1.45059	7.66
5	67.735	119.48	1.45148	7.70
7	111.702	161.44	1.45232	+7.74

MIMAS

0^h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		"
Juli 7	111.702	161.44	1.45232	+7.74
9	155.670	203.41	1.45312	7.78
11	199.638	245.38	1.45387	7.82
13	243.606	287.35	1.45457	7.86
15	287.574	329.31	1.45522	7.90
17	331.542	11.28	1.45581	+7.94
19	15.510	53.25	1.45636	7.98
21	59.478	95.22	1.45685	8.02
23	103.446	137.18	1.45728	8.06
25	147.413	179.15	1.45766	8.10
27	191.381	221.12	1.45798	+8.14
29	235.349	263.09	1.45824	8.17
31	279.317	305.05	1.45845	8.20
Aug. 2	323.285	347.02	1.45860	8.23
4	7.253	28.99	1.45869	8.26
6	51.221	70.96	1.45872	+8.29
8	95.188	112.92	1.45869	8.32
10	139.156	154.89	1.45861	8.35
12	183.124	196.86	1.45847	8.38
14	227.092	238.83	1.45827	8.40
16	271.059	280.79	1.45801	+8.42
18	315.027	322.76	1.45769	8.44
20	358.995	4.73	1.45732	8.46
22	42.963	46.70	1.45689	8.48
24	86.930	88.66	1.45640	8.50
26	130.898	130.63	1.45586	+8.52
28	174.866	172.60	1.45527	8.53
30	218.834	214.57	1.45462	8.54
Sept. 1	262.801	256.53	1.45392	8.55
3	306.769	298.50	1.45318	8.56
5	350.737	340.47	1.45238	+8.57
7	34.705	22.44	1.45154	8.57
9	78.672	64.40	1.45065	8.57
11	122.640	106.37	1.44971	8.57
13	166.608	148.34	1.44873	8.57
15	210.576	190.31	1.44771	+8.57
17	254.543	232.27	1.44665	8.57
19	298.511	274.24	1.44555	8.56
21	342.479	316.21	1.44442	8.55
23	26.446	358.18	1.44325	+8.54

Saturnstrabanten 1933

MIMAS

0h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933				
Sept. 23	26.446°	358.18°	1.44325	+8.54″
25	70.414	40.14	1.44205	8.53
27	114.382	82.11	1.44081	8.52
29	158.349	124.08	1.43955	8.51
Okt. 1	202.317	166.05	1.43826	8.49
3	246.285	208.01	1.43694	+8.47
5	290.252	249.98	1.43561	8.45
7	334.220	291.95	1.43425	8.43
9	18.187	333.92	1.43287	8.41
11	62.155	15.89	1.43147	8.39
13	106.123	57.86	1.43006	+8.36
15	150.090	99.82	1.42863	8.33
17	194.058	141.79	1.42719	8.30
19	238.026	183.76	1.42574	8.27
21	281.993	225.73	1.42428	8.24
23	325.961	267.70	1.42282	+8.21
25	9.928	309.67	1.42135	8.18
27	53.896	351.63	1.41988	8.15
29	97.864	33.60	1.41841	8.11
31	141.831	75.57	1.41693	8.07
Nov. 2	185.799	117.54	1.41547	+8.03
4	229.767	159.50	1.41400	7.99
6	273.734	201.47	1.41254	7.95
8	317.702	243.44	1.41109	7.91
10	1.669	285.40	1.40965	7.87
12	45.637	327.37	1.40822	+7.83
14	89.605	9.34	1.40680	7.79
16	133.572	51.30	1.40539	7.75
18	177.540	93.27	1.40400	7.70
20	221.508	135.24	1.40262	7.66
22	265.475	177.20	1.40127	+7.61
24	309.442	219.17	1.39993	7.57
26	353.410	261.14	1.39861	7.52
28	37.377	303.10	1.39731	7.48
30	81.345	345.07	1.39604	7.43
Dez. 2	125.312	27.04	1.39479	+7.39
4	169.280	69.01	1.39357	7.34
6	213.247	110.97	1.39237	7.30
8	257.215	152.94	1.39120	7.25
10	301.182	194.91	1.39005	+7.20

ENCELADUS

0h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933				
April 20	178.542°	319.6°	1.50935	+8.69″
22	344.005	124.4	1.51073	8.69
24	149.469	289.2	1.51213	8.70
26	314.932	94.0	1.51354	8.71
28	120.396	258.8	1.51497	8.72
30	285.859	63.6	1.51640	+8.73
Mai 2	91.323	228.4	1.51785	8.74
4	256.786	33.2	1.51930	8.76
6	62.250	197.9	1.52076	8.78
8	227.714	2.7	1.52223	8.80
10	33.178	167.5	1.52370	+8.82
12	198.641	332.3	1.52517	8.84
14	4.105	137.1	1.52665	8.86
16	169.569	301.9	1.52812	8.88
18	335.033	106.7	1.52959	8.91
20	140.497	271.5	1.53106	+8.94
22	305.961	76.2	1.53253	8.97
24	111.424	241.0	1.53398	9.00
26	276.888	45.8	1.53543	9.03
28	82.352	210.6	1.53686	9.06
30	247.816	15.4	1.53829	+9.09
Juni 1	53.280	180.2	1.53970	9.13
3	218.744	345.0	1.54109	9.17
5	24.208	149.8	1.54246	9.21
7	189.672	314.5	1.54382	9.25
9	355.135	119.3	1.54515	+9.29
11	160.599	284.1	1.54646	9.33
13	326.063	88.9	1.54774	9.37
15	131.527	253.7	1.54900	9.41
17	296.991	58.5	1.55023	9.45
19	102.455	223.3	1.55143	+9.49
21	267.919	28.1	1.55259	9.54
23	73.384	192.8	1.55372	9.59
25	238.848	357.6	1.55482	9.64
27	44.312	162.4	1.55588	9.69
29	209.776	327.2	1.55689	+9.74
Juli 1	15.240	132.0	1.55787	9.79
3	180.704	296.8	1.55880	9.84
5	346.168	101.6	1.55969	9.89
7	151.632	266.4	1.56053	+9.94

ENCELADUS

0^h Welt-Zeit		L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933		°	°		"
Juli	7	151.632	266.4	1.56053	+ 9.94
	9	317.097	71.1	1.56133	9.99
	11	122.561	235.9	1.56208	10.04
	13	288.025	40.7	1.56278	10.09
	15	93.489	205.5	1.56343	10.14
	17	258.953	10.3	1.56402	+10.19
	19	64.417	175.1	1.56457	10.24
	21	229.882	339.9	1.56506	10.29
	23	35.346	144.7	1.56549	10.34
	25	200.810	309.4	1.56587	10.39
	27	6.275	114.2	1.56619	+10.43
	29	171.739	279.0	1.56645	10.47
	31	337.203	83.8	1.56666	10.51
Aug.	2	142.668	248.6	1.56681	10.55
	4	308.132	53.4	1.56690	10.59
	6	113.597	218.2	1.56693	+10.63
	8	279.061	23.0	1.56690	10.67
	10	84.525	187.7	1.56682	10.71
	12	249.990	352.5	1.56668	10.74
	14	55.454	157.3	1.56648	10.77
	16	220.918	322.1	1.56622	+10.80
	18	26.383	126.9	1.56590	10.83
	20	191.847	291.7	1.56553	10.85
	22	357.312	96.5	1.56510	10.87
	24	162.776	261.3	1.56461	10.89
	26	328.241	66.0	1.56407	+10.91
	28	133.706	230.8	1.56348	10.93
	30	299.171	35.6	1.56283	10.95
Sept.	1	104.635	200.4	1.56213	10.97
	3	270.100	5.2	1.56139	10.98
	5	75.565	170.0	1.56059	+10.99
	7	241.029	334.8	1.55975	11.00
	9	46.494	139.6	1.55886	11.00
	11	211.959	304.4	1.55792	11.00
	13	17.424	109.2	1.55694	11.00
	15	182.888	274.0	1.55592	+11.00
	17	348.353	78.8	1.55486	10.99
	19	153.818	243.6	1.55376	10.98
	21	319.283	48.4	1.55263	10.97
	23	124.748	213.2	1.55146	+10.96

ENCELADUS

0^h Welt-Zeit		L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933		°	°		"
Sept.	23	124.748	213.2	1.55146	+10.96
	25	290.213	18.0	1.55026	10.94
	27	95.678	182.7	1.54902	10.92
	29	261.142	347.5	1.54776	10.90
Okt.	1	66.607	152.3	1.54647	10.88
	3	232.072	317.1	1.54515	+10.86
	5	37.537	121.9	1.54382	10.84
	7	203.002	286.7	1.54246	10.81
	9	8.467	91.5	1.54108	10.78
	11	173.932	256.3	1.53968	10.75
	13	339.397	61.0	1.53827	+10.72
	15	144.862	225.8	1.53684	10.69
	17	310.327	30.6	1.53540	10.65
	19	115.792	195.4	1.53395	10.61
	21	281.257	0.2	1.53249	10.57
	23	86.722	165.0	1.53103	+10.53
	25	252.187	329.8	1.52956	10.49
	27	57.652	134.6	1.52809	10.45
	29	223.117	299.3	1.52662	10.40
	31	28.583	104.1	1.52514	10.35
Nov.	2	194.048	268.9	1.52368	+10.30
	4	359.513	73.7	1.52221	10.25
	6	164.978	238.5	1.52075	10.20
	8	330.443	43.3	1.51930	10.15
	10	135.908	208.1	1.51786	10.10
	12	301.374	12.9	1.51643	+10.05
	14	106.839	177.6	1.51501	10.00
	16	272.304	342.4	1.51360	9.95
	18	77.770	147.2	1.51221	9.89
	20	243.235	312.0	1.51083	9.83
	22	48.700	116.8	1.50948	+ 9.77
	24	214.165	281.6	1.50814	9.72
	26	19.630	86.4	1.50682	9.66
	28	185.096	251.2	1.50552	9.60
	30	350.561	55.9	1.50425	9.54
Dez.	2	156.026	220.7	1.50300	+ 9.48
	4	321.492	25.5	1.50178	9.42
	6	126.957	190.3	1.50058	9.36
	8	292.422	355.1	1.49941	9.30
	10	97.887	159.9	1.49826	+ 9.24

TETHYS

0ʰ Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°			"
April 20	111.837		1.60204	+10.76
22	133.233		1.60342	10.77
24	154.630		1.60482	10.78
26	176.026		1.60623	10.79
28	197.423		1.60766	10.80
30	218.820		1.60909	+10.81
Mai 2	240.216		1.61054	10.82
4	261.613		1.61199	10.84
6	283.009		1.61345	10.86
8	304.406		1.61492	10.88
10	325.803		1.61639	+10.90
12	347.199		1.61786	10.93
14	8.596		1.61934	10.96
16	29.993		1.62081	10.99
18	51.389		1.62228	11.02
20	72.786		1.62375	+11.05
22	94.182		1.62522	11.09
24	115.579		1.62667	11.13
26	136.976		1.62812	11.17
28	158.372		1.62955	11.21
30	179.769		1.63098	+11.25
Juni 1	201.166		1.63239	11.29
3	222.562		1.63378	11.34
5	243.959		1.63515	11.39
7	265.355		1.63651	11.44
9	286.752		1.63784	+11.49
11	308.149		1.63915	11.54
13	329.545		1.64043	11.59
15	350.942		1.64169	11.64
17	12.339		1.64292	11.69
19	33.735		1.64412	+11.75
21	55.132		1.64528	11.81
23	76.528		1.64641	11.87
25	97.925		1.64751	11.93
27	119.322		1.64857	11.99
29	140.718		1.64958	+12.05
Juli 1	162.115		1.65056	12.11
3	183.511		1.65149	12.17
5	204.908		1.65238	12.23
7	226.304		1.65322	+12.29

TETHYS

0ʰ Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°			"
Juli 7	226.304		1.65322	+12.29
9	247.701		1.65402	12.35
11	269.097		1.65477	12.41
13	290.494		1.65547	12.47
15	311.890		1.65612	12.54
17	333.287		1.65671	+12.61
19	354.684		1.65726	12.67
21	16.080		1.65775	12.73
23	37.477		1.65818	12.79
25	58.873		1.65856	12.85
27	80.270		1.65888	+12.91
29	101.667		1.65914	12.97
31	123.063		1.65935	13.02
Aug. 2	144.460		1.65950	13.07
4	165.857		1.65959	13.12
6	187.253		1.65962	+13.17
8	208.650		1.65959	13.21
10	230.046		1.65951	13.25
12	251.443		1.65937	13.29
14	272.840		1.65917	13.33
16	294.236		1.65891	+13.37
18	315.633		1.65859	13.41
20	337.030		1.65822	13.44
22	358.426		1.65779	13.47
24	19.823		1.65730	13.50
26	41.219		1.65676	+13.52
28	62.616		1.65617	13.54
30	84.013		1.65552	13.56
Sept. 1	105.409		1.65482	13.58
3	126.806		1.65408	13.60
5	148.203		1.65328	+13.62
7	169.599		1.65244	13.63
9	190.996		1.65155	13.64
11	212.392		1.65061	13.64
13	233.789		1.64963	13.64
15	255.186		1.64861	+13.63
17	276.582		1.64755	13.62
19	297.979		1.64645	13.60
21	319.376		1.64532	13.58
23	340.772		1.64415	+13.56

0ʰ Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta}\sin B$	0ʰ Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta}\sin B$
TETHYS					DIONE				
1933	°			"	1933	°			"
Sept. 23	340.772		1.64415	+13.56	April 20	18.929	55.0	1.70952	+13.78
25	2.169		1.64295	13.54	22	281.999	317.9	1.71090	13.79
27	23.565		1.64171	13.52	24	185.069	220.8	1.71230	13.80
29	44.962		1.64045	13.50	26	88.138	123.7	1.71371	13.81
Okt. 1	66.359		1.63916	13.48	28	351.208	26.6	1.71514	13.83
3	87.755		1.63784	+13.45	30	254.278	289.5	1.71657	+13.85
5	109.152		1.63651	13.42	Mai 2	157.348	192.4	1.71802	13.87
7	130.549		1.63515	13.39	4	60.417	95.3	1.71947	13.89
9	151.945		1.63377	13.35	6	323.487	358.2	1.72093	13.91
11	173.342		1.63237	13.31	8	226.556	261.1	1.72240	13.94
13	194.738		1.63096	+13.27	10	129.626	164.0	1.72387	+13.97
15	216.135		1.62953	13.23	12	32.695	66.9	1.72534	14.00
17	237.532		1.62809	13.18	14	295.765	329.8	1.72682	14.04
19	258.928		1.62664	13.13	16	198.835	232.7	1.72829	14.08
21	280.325		1.62518	13.08	18	101.905	135.6	1.72976	14.12
23	301.722		1.62372	+13.03	20	4.974	38.5	1.73123	+14.16
25	323.118		1.62225	12.98	22	268.044	301.4	1.73270	14.21
27	344.515		1.62078	12.93	24	171.113	204.3	1.73415	14.26
29	5.911		1.61931	12.87	26	74.183	107.2	1.73560	14.31
31	27.308		1.61783	12.81	28	337.252	10.1	1.73703	14.36
Nov. 2	48.705		1.61637	+12.75	30	240.322	273.0	1.73846	+14.41
4	70.101		1.61490	12.69	Juni 1	143.392	175.9	1.73987	14.47
6	91.498		1.61344	12.63	3	46.462	78.8	1.74126	14.53
8	112.895		1.61199	12.57	5	309.531	341.7	1.74263	14.59
10	134.291		1.61055	12.51	7	212.601	244.6	1.74399	14.65
12	155.688		1.60912	+12.44	9	115.671	147.5	1.74532	+14.71
14	177.084		1.60770	12.37	11	18.741	50.4	1.74663	14.77
16	198.481		1.60629	12.30	13	281.810	313.3	1.74791	14.84
18	219.878		1.60490	12.23	15	184.880	216.2	1.74917	14.91
20	241.274		1.60352	12.16	17	87.950	119.1	1.75040	14.98
22	262.671		1.60217	+12.09	19	351.020	22.0	1.75160	+15.05
24	284.067		1.60083	12.02	21	254.089	284.9	1.75276	15.12
26	305.464		1.59951	11.95	23	157.159	187.8	1.75389	15.20
28	326.860		1.59821	11.88	25	60.228	90.7	1.75499	15.28
30	348.257		1.59694	11.81	27	323.298	353.6	1.75605	15.36
Dez. 2	9.653		1.59569	+11.74	29	226.367	256.5	1.75706	+15.44
4	31.050		1.59447	11.67	Juli 1	129.437	159.4	1.75804	15.52
6	52.446		1.59327	11.59	3	32.507	62.3	1.75897	15.60
8	73.843		1.59210	11.51	5	295.577	325.2	1.75986	15.68
10	95.240		1.59095	+11.43	7	198.646	228.1	1.76070	+15.76

Saturnstrabanten 1933

DIONE

0^h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		"
Juli 7	198.646	228.1	1.76070	+15.76
9	101.716	131.0	1.76150	15.84
11	4.785	33.9	1.76225	15.92
13	267.855	296.8	1.76295	16.00
15	170.924	199.7	1.76360	16.08
17	73.994	102.6	1.76419	+16.15
19	337.064	5.5	1.76474	16.23
21	240.134	268.4	1.76523	16.31
23	143.203	171.3	1.76566	16.38
25	46.273	74.2	1.76604	16.45
27	309.342	337.1	1.76636	+16.52
29	212.412	240.0	1.76662	16.59
31	115.481	142.9	1.76683	16.66
Aug. 2	18.551	45.8	1.76698	16.73
4	281.621	308.7	1.76707	16.80
6	184.690	211.6	1.76710	+16.86
8	87.760	114.5	1.76707	16.92
10	350.829	17.4	1.76699	16.98
12	253.899	280.3	1.76685	17.03
14	156.968	183.2	1.76665	17.08
16	60.038	86.1	1.76639	+17.13
18	323.107	349.0	1.76607	17.18
20	226.177	251.9	1.76570	17.22
22	129.247	154.8	1.76527	17.26
24	32.316	57.7	1.76478	17.30
26	295.386	320.6	1.76424	+17.33
28	198.455	223.5	1.76365	17.36
30	101.525	126.4	1.76300	17.38
Sept. 1	4.594	29.3	1.76230	17.40
3	267.664	292.2	1.76156	17.42
5	170.734	195.1	1.76076	+17.43
7	73.803	98.0	1.75992	17.44
9	336.873	0.9	1.75903	17.45
11	239.942	263.8	1.75809	17.45
13	143.012	166.7	1.75711	17.45
15	46.081	69.6	1.75609	+17.44
17	309.151	332.5	1.75503	17.43
19	212.220	235.4	1.75393	17.42
21	115.290	138.3	1.75280	17.40
23	18.360	41.2	1.75163	+17.38

DIONE

0^h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		"
Sept. 23	18.360	41.2	1.75163	+17.38
25	281.429	304.1	1.75043	17.36
27	184.499	207.0	1.74919	17.33
29	87.568	109.9	1.74793	17.30
Okt. 1	350.638	12.8	1.74664	17.26
3	253.707	275.7	1.74532	+17.22
5	156.777	178.6	1.74399	17.18
7	59.847	81.5	1.74263	17.14
9	322.916	344.4	1.74125	17.09
11	225.986	247.3	1.73985	17.04
13	129.055	150.2	1.73844	+16.99
15	32.125	53.1	1.73701	16.93
17	295.194	316.0	1.73557	16.87
19	198.264	218.9	1.73412	16.81
21	101.333	121.8	1.73266	16.75
23	4.403	24.7	1.73120	+16.68
25	267.473	287.6	1.72973	16.61
27	170.542	190.5	1.72826	16.54
29	73.612	93.4	1.72679	16.47
31	336.681	356.3	1.72531	16.40
Nov. 2	239.751	259.2	1.72385	+16.33
4	142.820	162.1	1.72238	16.25
6	45.890	65.0	1.72092	16.17
8	308.960	327.9	1.71947	16.09
10	212.029	230.8	1.71803	16.01
12	115.099	133.7	1.71660	+15.93
14	18.168	36.6	1.71518	15.85
16	281.238	299.5	1.71377	15.76
18	184.307	202.4	1.71238	15.67
20	87.377	105.3	1.71100	15.58
22	350.446	8.2	1.70965	+15.49
24	253.516	271.1	1.70831	15.40
26	156.585	174.0	1.70699	15.31
28	59.655	76.9	1.70569	15.22
30	322.724	339.8	1.70442	15.13
Dez. 2	225.794	242.7	1.70317	+15.04
4	128.863	145.6	1.70195	14.95
6	31.933	48.5	1.70075	14.85
8	295.002	311.4	1.69958	14.75
10	198.072	214.3	1.69843	+14.65

RHEA

0h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		"
April 20	85.415	264.0	1.85456	+19.25
22	244.795	63.4	1.85594	19.26
24	44.175	222.8	1.85734	19.27
26	203.555	22.2	1.85875	19.29
28	2.935	181.6	1.86018	19.31
30	162.315	341.0	1.86161	+19.33
Mai 2	321.695	140.4	1.86306	19.36
4	121.075	299.8	1.86451	19.39
6	280.455	99.1	1.86597	19.43
8	79.834	258.5	1.86744	19.47
10	239.214	57.9	1.86891	+19.51
12	38.594	217.3	1.87038	19.56
14	197.974	16.7	1.87186	19.61
16	357.354	176.1	1.87333	19.66
18	156.734	335.5	1.87480	19.72
20	316.114	134.9	1.87627	+19.78
22	115.494	294.3	1.87774	19.84
24	274.874	93.7	1.87919	19.91
26	74.254	253.1	1.88064	19.98
28	233.634	52.5	1.88207	20.05
30	33.014	211.9	1.88350	+20.12
Juni 1	192.394	11.3	1.88491	20.20
3	351.774	170.7	1.88630	20.28
5	151.154	330.1	1.88767	20.37
7	310.534	129.4	1.88903	20.46
9	109.913	288.8	1.89036	+20.55
11	269.293	88.2	1.89167	20.64
13	68.673	247.6	1.89295	20.73
15	228.053	47.0	1.89421	20.83
17	27.433	206.4	1.89544	20.93
19	186.813	5.8	1.89664	+21.03
21	346.193	165.2	1.89780	21.13
23	145.573	324.5	1.89893	21.23
25	304.953	123.9	1.90003	21.34
27	104.333	283.3	1.90109	21.45
29	263.713	82.7	1.90210	+21.56
Juli 1	63.093	242.1	1.90308	21.67
3	222.473	41.5	1.90401	21.78
5	21.853	200.9	1.90490	21.89
7	181.233	0.3	1.90574	+22.00

RHEA

0h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		"
Juli 7	181.233	0.3	1.90574	+22.00
9	340.613	159.7	1.90654	22.11
11	139.992	319.1	1.90729	22.22
13	299.372	118.5	1.90799	22.33
15	98.752	277.9	1.90864	22.44
17	258.132	77.3	1.90923	+22.55
19	57.512	236.7	1.91078	22.66
21	216.892	36.1	1.91027	22.77
23	16.272	195.5	1.91070	22.87
25	175.652	354.8	1.91108	22.97
27	335.032	154.2	1.91140	+23.07
29	134.412	313.6	1.91166	23.17
31	293.792	113.0	1.91187	23.27
Aug. 2	93.172	272.4	1.91202	23.37
4	252.552	71.8	1.91211	23.46
6	51.932	231.2	1.91214	+23.55
8	211.312	30.6	1.91211	23.63
10	10.692	190.0	1.91203	23.71
12	170.071	349.3	1.91189	23.79
14	329.451	148.7	1.91169	23.86
16	128.831	308.1	1.91143	+23.93
18	288.211	107.5	1.91111	23.99
20	87.591	266.9	1.91074	24.05
22	246.971	66.3	1.91031	24.11
24	46.351	225.7	1.90982	24.16
26	205.731	25.0	1.90928	+24.20
28	5.111	184.4	1.90869	24.24
30	164.491	343.8	1.90804	24.27
Sept. 1	323.871	143.2	1.90734	24.30
3	123.251	302.6	1.90660	24.32
5	282.631	102.0	1.90580	+24.34
7	82.011	261.4	1.90496	24.35
9	241.391	60.8	1.90407	24.36
11	40.770	220.2	1.90313	24.36
13	200.150	19.6	1.90215	24.36
15	359.530	179.0	1.90113	+24.35
17	158.910	338.4	1.90007	24.34
19	318.290	137.8	1.89897	24.32
21	117.670	297.2	1.89784	24.30
23	277.050	96.6	1.89667	+24.27

Saturnstrabanten 1933

RHEA

0^h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		″
Sept. 23	277.050	96.6	1.89667	+24.27
25	76.430	256.0	1.89547	24.24
27	235.810	55.3	1.89423	24.20
29	35.190	214.7	1.89297	24.16
Okt. 1	194.570	14.1	1.89168	24.11
3	353.950	173.5	1.89036	+24.06
5	153.330	332.9	1.88903	24.00
7	312.710	132.3	1.88767	23.94
9	112.090	291.7	1.88629	23.88
11	271.470	91.1	1.88489	23.81
13	70.850	250.4	1.88348	+23.74
15	230.229	49.8	1.88205	23.66
17	29.609	209.2	1.88061	23.58
19	188.989	8.6	1.87916	23.49
21	348.369	168.0	1.87770	23.40
23	147.749	327.4	1.87624	+23.31
25	307.129	126.8	1.87477	23.21
27	106.509	286.2	1.87330	23.11
29	265.889	85.6	1.87183	23.01
31	65.269	245.0	1.87035	22.91
Nov. 2	224.649	44.4	1.86889	+22.80
4	24.029	203.8	1.86742	22.69
6	183.409	3.2	1.86596	22.58
8	342.789	162.6	1.86451	22.47
10	142.169	322.0	1.86307	22.35
12	301.549	121.4	1.86164	+22.23
14	100.929	280.8	1.86022	22.11
16	260.309	80.1	1.85881	21.99
18	59.689	239.5	1.85742	21.87
20	219.069	38.9	1.85604	21.75
22	18.449	198.3	1.85469	+21.63
24	177.829	357.7	1.85335	21.51
26	337.209	157.1	1.85203	21.38
28	136.589	316.5	1.85073	21.25
30	295.969	115.9	1.84946	21.12
Dez. 2	95.348	275.2	1.84821	+20.99
4	254.728	74.6	1.84699	20.86
6	54.108	234.0	1.84579	20.73
8	213.488	33.4	1.84462	20.60
10	12.868	192.8	1.84347	+20.47

TITAN

0^h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		″
April 20	59.55	245.6	2.21971	+44.63
22	104.71	290.7	2.22109	44.65
24	149.86	335.9	2.22249	44.68
26	195.01	21.0	2.22390	44.72
28	240.17	66.2	2.22533	44.77
30	285.32	111.3	2.22676	+44.83
Mai 2	330.48	156.5	2.22821	44.90
4	15.63	201.6	2.22966	44.97
6	60.78	246.8	2.23112	45.05
8	105.94	291.9	2.23259	45.14
10	151.09	337.1	2.23406	+45.24
12	196.24	22.2	2.23553	45.34
14	241.40	67.4	2.23701	45.45
16	286.55	112.5	2.23848	45.57
18	331.71	157.7	2.23995	45.70
20	16.86	202.8	2.24142	+45.84
22	62.01	248.0	2.24289	45.98
24	107.17	293.1	2.24434	46.13
26	152.32	338.3	2.24579	46.29
28	197.47	23.4	2.24722	46.46
30	242.63	68.6	2.24865	+46.64
Juni 1	287.78	113.7	2.25006	46.82
3	332.94	158.9	2.25145	47.01
5	18.09	204.0	2.25282	47.21
7	63.24	249.2	2.25418	47.41
9	108.40	294.3	2.25551	+47.62
11	153.55	339.5	2.25682	47.83
13	198.70	24.6	2.25810	48.05
15	243.86	69.8	2.25936	48.28
17	289.01	114.9	2.26059	48.51
19	334.17	160.1	2.26179	+48.74
21	19.32	205.2	2.26295	48.98
23	64.47	250.4	2.26408	49.22
25	109.63	295.5	2.26518	49.47
27	154.78	340.7	2.26624	49.72
29	199.93	25.8	2.26725	+49.97
Juli 1	245.09	71.0	2.26823	50.23
3	290.24	116.2	2.26916	50.48
5	335.40	161.3	2.27005	50.74
7	20.55	206.5	2.27089	+51.00

TITAN

0^h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		″
Juli 7	20.55	206.5	2.27089	+51.00
9	65.70	251.7	2.27169	51.25
11	110.86	296.8	2.27244	51.51
13	156.01	342.0	2.27314	51.76
15	201.16	27.2	2.27379	52.02
17	246.32	72.3	2.27438	+52.28
19	291.47	117.4	2.27493	52.53
21	336.63	162.6	2.27542	52.78
23	21.78	207.7	2.27585	53.02
25	66.93	252.9	2.27623	53.26
27	112.09	298.0	2.27655	+53.49
29	157.24	343.2	2.27681	53.72
31	202.39	28.3	2.27702	53.95
Aug. 2	247.55	73.5	2.27717	54.17
4	292.70	118.6	2.27726	54.38
6	337.86	163.8	2.27729	+54.58
8	23.01	208.9	2.27726	54.77
10	68.16	254.1	2.27718	54.95
12	113.32	299.2	2.27704	55.13
14	158.47	344.4	2.27684	55.30
16	203.62	29.5	2.27658	+55.46
18	248.78	74.7	2.27626	55.61
20	293.93	119.8	2.27589	55.75
22	339.09	165.0	2.27546	55.88
24	24.24	210.1	2.27497	55.99
26	69.39	255.3	2.27443	+56.09
28	114.55	300.4	2.27384	56.18
30	159.70	345.6	2.27319	56.26
Sept. 1	204.85	30.7	2.27249	56.33
3	250.01	75.9	2.27175	56.38
5	295.16	121.0	2.27095	+56.42
7	340.32	166.2	2.27011	56.45
9	25.47	211.3	2.26922	56.47
11	70.62	256.5	2.26828	56.48
13	115.78	301.6	2.26730	56.47
15	160.93	346.8	2.26628	+56.45
17	206.08	31.9	2.26522	56.42
19	251.24	77.1	2.26412	56.38
21	296.39	122.2	2.26299	56.33
23	341.55	167.4	2.26182	+56.26

TITAN

0^h Welt-Zeit	L	M	$\log \frac{a(\Delta)}{\Delta}$	$\frac{a(\Delta)}{\Delta} \sin B$
1933	°	°		″
Sept. 23	341.55	167.4	2.26182	+56.26
25	26.70	212.5	2.26062	56.18
27	71.85	257.7	2.25938	56.09
29	117.01	302.8	2.25812	55.99
Okt. 1	162.16	348.0	2.25683	55.88
3	207.31	33.1	2.25551	+55.76
5	252.47	78.3	2.25418	55.63
7	297.62	123.4	2.25282	55.49
9	342.78	168.6	2.25144	55.34
11	27.93	213.7	2.25004	55.18
13	73.08	258.9	2.24863	+55.01
15	118.24	304.0	2.24720	54.83
17	163.39	349.2	2.24576	54.64
19	208.54	34.3	2.24431	54.44
21	253.70	79.5	2.24285	54.24
23	298.85	124.6	2.24139	+54.03
25	344.01	169.8	2.23992	53.81
27	29.16	214.9	2.23845	53.58
29	74.32	260.1	2.23698	53.35
31	119.47	305.2	2.23550	53.11
Nov. 2	164.63	350.4	2.23404	+52.86
4	209.78	35.5	2.23257	52.61
6	254.94	80.7	2.23111	52.35
8	300.09	125.8	2.22966	52.09
10	345.25	171.0	2.22822	51.82
12	30.40	216.1	2.22679	+51.55
14	75.55	261.3	2.22537	51.28
16	120.71	306.4	2.22396	51.00
18	165.86	351.6	2.22257	50.72
20	211.01	36.7	2.22119	50.43
22	256.17	81.9	2.21984	+50.14
24	301.32	127.0	2.21850	49.84
26	346.48	172.2	2.21718	49.54
28	31.63	217.3	2.21588	49.24
30	76.78	262.5	2.21461	48.94
Dez. 2	121.94	307.6	2.21336	+48.64
4	167.09	352.8	2.21214	48.34
6	212.24	37.9	2.21094	48.04
8	257.40	83.1	2.20977	47.74
10	302.55	128.2	2.20862	+47.44

Saturnstrabanten 1933

M	Mimas		Enceladus		Dione		Rhea		M
	$\pm(v-M)$	$\log \frac{r}{a}$	$\pm(v-M)$	$\log \frac{r}{a}$	$\pm(v-M)$	$\log \frac{r}{a}$	$\pm(v-M)$	$\log \frac{r}{a}$	
°	°		°		°				°
0	0.000	9.99167	0.000	9.99800	0.000	9.99913	0.000	9.99961	360
2	0.078	9.99167	0.018	9.99800	0.008	9.99913	0.004	9.99961	358
4	0.156	9.99169	0.037	9.99800	0.016	9.99913	0.007	9.99961	356
6	0.233	9.99172	0.055	9.99801	0.024	9.99913	0.011	9.99961	354
8	0.310	9.99175	0.074	9.99802	0.032	9.99914	0.014	9.99961	352
10	0.387	9.99180	0.092	9.99803	0.040	9.99914	0.018	9.99961	350
12	0.463	9.99186	0.110	9.99804	0.048	9.99915	0.021	9.99962	348
14	0.539	9.99193	0.128	9.99806	0.056	9.99916	0.025	9.99962	346
16	0.614	9.99201	0.146	9.99808	0.063	9.99916	0.028	9.99962	344
18	0.688	9.99210	0.164	9.99810	0.071	9.99917	0.032	9.99963	342
20	0.762	9.99220	0.181	9.99812	0.079	9.99918	0.035	9.99963	340
22	0.834	9.99230	0.199	9.99814	0.086	9.99919	0.039	9.99964	338
24	0.905	9.99242	0.216	9.99817	0.093	9.99921	0.042	9.99964	336
26	0.975	9.99255	0.232	9.99820	0.101	9.99922	0.045	9.99965	334
28	1.044	9.99269	0.249	9.99823	0.108	9.99923	0.048	9.99966	332
30	1.111	9.99284	0.265	9.99827	0.115	9.99925	0.052	9.99966	330
32	1.177	9.99299	0.281	9.99830	0.122	9.99926	0.055	9.99967	328
34	1.242	9.99316	0.296	9.99834	0.128	9.99928	0.058	9.99968	326
36	1.305	9.99333	0.311	9.99838	0.135	9.99930	0.061	9.99968	324
38	1.366	9.99351	0.326	9.99842	0.141	9.99931	0.064	9.99969	322
40	1.425	9.99370	0.340	9.99847	0.148	9.99933	0.066	9.99970	320
42	1.483	9.99390	0.354	9.99852	0.154	9.99935	0.069	9.99971	318
44	1.538	9.99410	0.368	9.99856	0.159	9.99937	0.072	9.99972	316
46	1.592	9.99431	0.381	9.99861	0.165	9.99940	0.074	9.99973	314
48	1.644	9.99453	0.393	9.99866	0.171	9.99942	0.077	9.99974	312
50	1.693	9.99476	0.405	9.99872	0.176	9.99944	0.079	9.99975	310
52	1.741	9.99499	0.417	9.99877	0.181	9.99947	0.081	9.99976	308
54	1.786	9.99523	0.428	9.99883	0.186	9.99949	0.083	9.99977	306
56	1.829	9.99547	0.438	9.99889	0.190	9.99951	0.085	9.99978	304
58	1.870	9.99572	0.448	9.99895	0.195	9.99954	0.087	9.99979	302
60	1.908	9.99597	0.458	9.99901	0.199	9.99957	0.089	9.99980	300
62	1.944	9.99623	0.467	9.99907	0.203	9.99959	0.091	9.99982	298
64	1.977	9.99650	0.475	9.99913	0.206	9.99962	0.093	9.99983	296
66	2.008	9.99677	0.483	9.99919	0.210	9.99965	0.094	9.99984	294
68	2.036	9.99704	0.490	9.99926	0.213	9.99967	0.096	9.99985	292
70	2.062	9.99731	0.496	9.99932	0.216	9.99970	0.097	9.99987	290
72	2.086	9.99759	0.502	9.99939	0.218	9.99973	0.098	9.99988	288
74	2.106	9.99787	0.508	9.99946	0.220	9.99976	0.099	9.99989	286
76	2.124	9.99815	0.512	9.99952	0.222	9.99979	0.100	9.99991	284
78	2.140	9.99843	0.516	9.99959	0.224	9.99982	0.101	9.99992	282
80	2.153	9.99872	0.520	9.99966	0.226	9.99985	0.102	9.99993	280
82	2.163	9.99900	0.523	9.99973	0.227	9.99988	0.102	9.99995	278
84	2.170	9.99929	0.525	9.99980	0.228	9.99991	0.103	9.99996	276
86	2.175	9.99958	0.526	9.99987	0.229	9.99994	0.103	9.99997	274
88	2.177	9.99987	0.527	9.99994	0.229	9.99997	0.103	9.99999	272
90	2.177	0.00016	0.527	0.00001	0.229	0.00000	0.103	0.00000	270

M	Mimas		Enceladus		Dione		Rhea		M
	$\pm(v-M)$	$\log \frac{r}{a}$	$(\pm v-M)$	$\log \frac{r}{a}$	$\pm(v-M)$	$\log \frac{r}{a}$	$\pm(v-M)$	$\log \frac{r}{a}$	
°	°		°		°		°		°
90	2.177	0.00016	0.527	0.00001	0.229	0.00000	0.103	0.00000	270
92	2.174	0.00044	0.527	0.00008	0.229	0.00003	0.103	0.00001	268
94	2.168	0.00073	0.526	0.00015	0.229	0.00006	0.103	0.00003	266
96	2.159	0.00101	0.524	0.00022	0.228	0.00009	0.103	0.00004	264
98	2.148	0.00130	0.522	0.00029	0.227	0.00012	0.102	0.00005	262
100	2.135	0.00158	0.519	0.00035	0.226	0.00015	0.102	0.00007	260
102	2.119	0.00186	0.515	0.00042	0.224	0.00018	0.101	0.00008	258
104	2.100	0.00214	0.511	0.00049	0.222	0.00021	0.100	0.00009	256
106	2.079	0.00241	0.506	0.00056	0.220	0.00024	0.099	0.00011	254
108	2.055	0.00268	0.500	0.00062	0.218	0.00027	0.098	0.00012	252
110	2.029	0.00295	0.494	0.00069	0.215	0.00030	0.097	0.00013	250
112	2.000	0.00321	0.488	0.00075	0.212	0.00033	0.096	0.00015	248
114	1.969	0.00347	0.481	0.00082	0.209	0.00035	0.094	0.00016	246
116	1.936	0.00373	0.473	0.00088	0.206	0.00038	0.093	0.00017	244
118	1.901	0.00398	0.464	0.00094	0.202	0.00041	0.091	0.00018	242
120	1.863	0.00422	0.455	0.00100	0.198	0.00044	0.089	0.00019	240
122	1.823	0.00446	0.446	0.00106	0.194	0.00046	0.087	0.00021	238
124	1.781	0.00469	0.436	0.00112	0.190	0.00049	0.085	0.00022	236
126	1.737	0.00492	0.425	0.00118	0.185	0.00051	0.083	0.00023	234
128	1.691	0.00514	0.414	0.00123	0.180	0.00053	0.081	0.00024	232
130	1.643	0.00536	0.402	0.00129	0.175	0.00056	0.079	0.00025	230
132	1.593	0.00557	0.390	0.00134	0.170	0.00058	0.077	0.00026	228
134	1.541	0.00577	0.378	0.00139	0.164	0.00060	0.074	0.00027	226
136	1.487	0.00597	0.365	0.00144	0.159	0.00062	0.072	0.00028	224
138	1.431	0.00616	0.351	0.00148	0.153	0.00065	0.069	0.00029	222
140	1.374	0.00634	0.337	0.00153	0.147	0.00067	0.066	0.00030	220
142	1.316	0.00651	0.323	0.00157	0.141	0.00068	0.064	0.00031	218
144	1.256	0.00668	0.308	0.00162	0.134	0.00070	0.061	0.00032	216
146	1.194	0.00683	0.293	0.00166	0.128	0.00072	0.058	0.00032	214
148	1.131	0.00698	0.278	0.00169	0.121	0.00074	0.055	0.00033	212
150	1.067	0.00713	0.262	0.00173	0.114	0.00075	0.052	0.00034	210
152	1.001	0.00726	0.246	0.00176	0.107	0.00077	0.048	0.00034	208
154	0.934	0.00738	0.230	0.00179	0.100	0.00078	0.045	0.00035	206
156	0.867	0.00750	0.213	0.00182	0.093	0.00079	0.042	0.00036	204
158	0.798	0.00760	0.196	0.00185	0.086	0.00080	0.039	0.00036	202
160	0.728	0.00770	0.179	0.00187	0.078	0.00081	0.035	0.00037	200
162	0.658	0.00779	0.162	0.00190	0.071	0.00082	0.032	0.00037	198
164	0.587	0.00787	0.144	0.00192	0.063	0.00083	0.028	0.00037	196
166	0.515	0.00794	0.127	0.00193	0.055	0.00084	0.025	0.00038	194
168	0.442	0.00800	0.109	0.00195	0.048	0.00085	0.021	0.00038	192
170	0.369	0.00805	0.091	0.00196	0.040	0.00085	0.018	0.00038	190
172	0.296	0.00810	0.073	0.00197	0.032	0.00086	0.014	0.00039	188
174	0.222	0.00813	0.055	0.00198	0.024	0.00086	0.011	0.00039	186
176	0.148	0.00815	0.037	0.00199	0.016	0.00086	0.007	0.00039	184
178	0.074	0.00817	0.018	0.00199	0.008	0.00087	0.004	0.00039	182
180	0.000	0.00817	0.000	0.00199	0.000	0.00087	0.000	0.00039	180

Saturnstrabanten 1933

Bewegung der mittleren Länge L und der mittleren Anomalie M

Zeit	Mimas		Enceladus		Tethys	Dione		Rhea		Titan	
	L	*M*	*L*	*M*	*L*	*L*	*M*	*L*	*M*	*L*	*M*
d	°	°	°	°	°	°	°	°	°	°	°
1	381.984	380.99	262.732	262.4	190.698	131.535	131.5	79.690	79.7	22.58	22.6
h	°	°	°	°	°	°	°	°	°	°	°
1	15.916	15.87	10.947	10.9	7.946	5.481	5.5	3.320	3.3	0.94	0.9
2	31.832	31.75	21.894	21.9	15.892	10.961	11.0	6.641	6.6	1.88	1.9
3	47.748	47.62	32.842	32.8	23.837	16.442	16.4	9.961	10.0	2.82	2.8
4	63.664	63.50	43.789	43.7	31.783	21.923	21.9	13.282	13.3	3.76	3.8
5	79.580	79.37	54.736	54.7	39.729	27.403	27.4	16.602	16.6	4.70	4.7
6	95.496	95.25	65.683	65.6	47.675	32.884	32.9	19.922	19.9	5.64	5.7
7	111.412	111.12	76.630	76.5	55.620	38.364	38.4	23.243	23.2	6.59	6.6
8	127.328	127.00	87.577	87.5	63.566	43.845	43.8	26.563	26.6	7.53	7.5
9	143.244	142.87	98.525	98.4	71.512	49.326	49.3	29.884	29.9	8.47	8.5
10	159.160	158.75	109.472	109.3	79.458	54.806	54.8	33.204	33.2	9.41	9.4
11	175.076	174.62	120.419	120.3	87.403	60.287	60.3	36.525	36.5	10.35	10.4
12	190.992	190.50	131.366	131.2	95.349	65.767	65.7	39.845	39.8	11.29	11.3
13	206.908	206.37	142.313	142.1	103.295	71.248	71.2	43.165	43.2	12.23	12.2
14	222.824	222.24	153.260	153.1	111.241	76.729	76.7	46.486	46.5	13.17	13.2
15	238.740	238.12	164.208	164.0	119.186	82.209	82.2	49.806	49.8	14.11	14.1
16	254.656	253.99	175.155	174.9	127.132	87.690	87.7	53.127	53.1	15.05	15.1
17	270.572	269.87	186.102	185.9	135.078	93.171	93.1	56.447	56.5	15.99	16.0
18	286.488	285.74	197.049	196.8	143.024	98.651	98.6	59.767	59.8	16.93	17.0
19	302.404	301.62	207.996	207.7	150.969	104.132	104.1	63.088	63.1	17.88	17.9
20	318.320	317.49	218.943	218.7	158.915	109.613	109.6	66.408	66.4	18.82	18.8
21	334.236	333.37	229.891	229.6	166.861	115.093	115.1	69.729	69.7	19.76	19.8
22	350.152	349.24	240.838	240.5	174.806	120.574	120.5	73.049	73.1	20.70	20.7
23	366.068	365.12	251.785	251.5	182.752	126.054	126.0	76.370	76.4	21.64	21.7
m	°	°	°	°	°	°	°	°	°	°	°
1	0.265	0.26	0.182	0.2	0.132	0.091	0.1	0.055	0.0	0.02	0.0
2	0.531	0.53	0.365	0.4	0.265	0.183	0.2	0.111	0.1	0.03	0.0
3	0.796	0.79	0.547	0.5	0.397	0.274	0.3	0.166	0.1	0.05	0.0
4	1.061	1.06	0.730	0.7	0.530	0.365	0.4	0.221	0.2	0.06	0.1
5	1.326	1.32	0.912	0.9	0.662	0.457	0.5	0.277	0.2	0.08	0.1
6	1.592	1.58	1.095	1.1	0.795	0.548	0.5	0.332	0.3	0.09	0.1
7	1.857	1.85	1.278	1.3	0.927	0.640	0.6	0.387	0.3	0.11	0.1
8	2.122	2.11	1.460	1.4	1.060	0.731	0.7	0.442	0.4	0.13	0.1
9	2.387	2.38	1.642	1.6	1.192	0.822	0.8	0.497	0.4	0.14	0.1
10	2.653	2.64	1.825	1.8	1.324	0.914	0.9	0.553	0.5	0.16	0.2
20	5.305	5.29	3.649	3.6	2.649	1.827	1.8	1.107	1.1	0.31	0.3
30	7.958	7.93	5.474	5.4	3.973	2.740	2.7	1.660	1.6	0.47	0.5
40	10.611	10.58	7.298	7.3	5.297	3.654	3.7	2.214	2.2	0.63	0.6
50	13.263	13.22	9.123	9.1	6.622	4.567	4.6	2.767	2.7	0.78	0.8
s	°	°	°	°	°	°	°	°	°	°	°
10	0.044	0.04	0.030	0.0	0.022	0.015	0.0	0.009	0.0	0.00	0.0
20	0.088	0.09	0.061	0.1	0.044	0.030	0.0	0.018	0.0	0.01	0.0
30	0.133	0.13	0.091	0.1	0.066	0.046	0.0	0.028	0.0	0.01	0.0
40	0.177	0.17	0.122	0.1	0.088	0.061	0.1	0.037	0.0	0.01	0.0
50	0.221	0.22	0.152	0.2	0.110	0.076	0.1	0.046	0.0	0.01	0.0

0h Welt-Zeit	ϑ Mimas	ϑ Encel.	ϑ Tethys	ϑ Dione	ϑ Rhea	γ Rhea	N Saturnsring	J Saturnsring	ω Saturnsring
1933	°	°	°	°	°	°	°	°	°
Jan. −10	156.4	5.0	54.1	234.0	298.2	21.00	127.748	6.783	41.934
+6	140.4	358.4	50.9	232.6	297.8	21.01	127.750	6.783	41.932
22	124.4	351.7	47.7	231.3	297.3	21.03	127.752	6.783	41.931
Febr. 7	108.4	345.0	44.5	229.9	296.9	21.04	127.754	6.782	41.930
23	92.4	338.3	41.4	228.6	296.5	21.06	127.756	6.782	41.928
März 11	76.4	331.6	38.2	227.2	296.0	21.07	127.758	6.782	41.927
27	60.4	324.9	35.0	225.8	295.6	21.08	127.760	6.782	41.926
April 12	44.4	318.3	31.8	224.5	295.2	21.10	127.761	6.782	41.925
28	28.4	311.6	28.7	223.1	294.7	21.11	127.763	6.781	41.923
Mai 14	12.4	304.9	25.5	221.8	294.3	21.12	127.765	6.781	41.922
30	356.3	298.2	22.3	220.4	293.9	21.14	127.767	6.781	41.921
Juni 15	340.3	291.5	19.1	219.0	293.4	21.15	127.768	6.781	41.920
Juli 1	324.3	284.8	15.9	217.7	293.0	21.16	127.770	6.781	41.918
17	308.3	278.0	12.8	216.3	292.6	21.18	127.772	6.780	41.917
Aug. 2	292.3	271.4	9.6	215.0	292.1	21.19	127.774	6.780	41.916
18	276.3	264.7	6.4	213.6	291.7	21.20	127.776	6.780	41.914
Sept. 3	260.3	258.0	3.2	212.2	291.3	21.22	127.778	6.780	41.913
19	244.3	251.3	0.1	210.9	290.8	21.23	127.780	6.780	41.912
Okt. 5	228.3	244.6	356.9	209.5	290.4	21.25	127.781	6.780	41.911
21	212.3	237.9	353.7	208.2	290.0	21.26	127.783	6.779	41.909
Nov. 6	196.3	231.2	350.5	206.8	289.5	21.27	127.785	6.779	41.908
22	180.3	224.5	347.3	205.4	289.1	21.29	127.787	6.779	41.907
Dez. 8	164.3	217.9	344.2	204.1	288.7	21.30	127.789	6.779	41.906
24	148.3	211.2	341.0	202.7	288.2	21.31	127.790	6.778	41.904
40	132.3	204.5	337.8	201.4	287.8	21.33	127.792	6.778	41.903

$\log \frac{1}{1+\zeta}$, in Einheiten der 5. Dezimale

$u-U$		Mimas	Encel.	Tethys	Dione	Rhea	$u-U$	
°	°						°	°
0	360	−6+	−7+	−9+	−11+	−16+	180	180
10	350	−6+	−7+	−9+	−11+	−16+	170	190
20	340	−5+	−7+	−8+	−11+	−15+	160	200
30	330	−5+	−6+	−8+	−10+	−14+	150	210
40	320	−4+	−6+	−7+	−9+	−12+	140	220
50	310	−3+	−5+	−6+	−8+	−10+	130	230
60	300	−3+	−4+	−4+	−6+	−8+	120	240
70	290	−2+	−3+	−3+	−4+	−6+	110	250
80	280	−1+	−1+	−2+	−2+	−3+	100	260
90	270	0	0	0	0	0	90	270

Saturnstrabanten 1933

0h Welt-Zeit	HYPERION U		B		P	
1933	°		°		°	
April 20	189.028	109	+16.007	41	+6.737	3
22	189.137	104	15.966	39	6.734	3
24	189.241	99	15.927	37	6.731	3
26	189.340	93	15.890	35	6.728	2
28	189.433	87	15.855	32	6.726	2
30	189.520	81	+15.823	30	+6.724	2
Mai 2	189.601	76	15.793	27	6.722	2
4	189.677	70	15.766	24	6.720	2
6	189.747	64	15.742	22	6.718	2
8	189.811	58	15.720	19	6.716	2
10	189.869	51	+15.701	17	+6.714	1
12	189.920	46	15.684	14	6.713	1
14	189.966	40	15.670	11	6.712	1
16	190.006	33	15.659	9	6.711	1
18	190.039	27	15.650	6	6.710	1
20	190.066	21	+15.644	4	+6.709	0
22	190.087	15	15.640	1	6.709	0
24	190.102	9	15.639	— 2	6.709	0
26	190.111	2	15.641	5	6.709	1
28	190.113	— 4	15.646	7	6.710	0
30	190.109	10	+15.653	10	+6.710	1
Juni 1	190.099	16	15.663	13	6.711	1
3	190.083	22	15.676	15	6.712	1
5	190.061	28	15.691	18	6.713	1
7	190.033	34	15.709	20	6.714	1
9	189.999	40	+15.729	23	+6.715	1
11	189.959	46	15.752	26	6.716	2
13	189.913	52	15.778	28	6.718	2
15	189.861	58	15.806	30	6.720	2
17	189.803	63	15.836	33	6.722	2
19	189.740	68	+15.869	35	+6.724	3
21	189.672	74	15.904	37	6.727	3
23	189.598	79	15.941	40	6.730	3
25	189.519	84	15.981	42	6.733	3
27	189.435	89	16.023	43	6.736	3
29	189.346	94	+16.066	45	+6.739	3
Juli 1	189.252	99	16.111	47	6.742	3
3	189.153	103	16.158	49	6.745	3
5	189.050	107	16.207	51	6.748	4
7	188.943		+16.258		+6.752	

0h Welt-Zeit	HYPERION U		B		P	
1933	°		°		°	
Juli 7	188.943	111	+16.258	52	+6.752	3
9	188.832	115	16.310	54	6.755	4
11	188.717	119	16.364	55	6.759	4
13	188.598	122	16.419	56	6.763	4
15	188.476	125	16.475	57	6.767	4
17	188.351	128	+16.532	58	+6.771	4
19	188.223	131	16.590	59	6.775	4
21	188.092	133	16.649	60	6.779	4
23	187.959	135	16.709	61	6.783	4
25	187.824	137	16.770	61	6.787	4
27	187.687	139	+16.831	62	+6.791	4
29	187.548	140	16.893	62	6.795	4
31	187.408	141	16.955	62	6.799	4
Aug. 2	187.267	142	17.017	62	6.803	4
4	187.125	142	17.079	62	6.807	4
6	186.983	142	+17.141	62	+6.811	4
8	186.841	143	17.203	61	6.815	3
10	186.698	142	17.264	61	6.818	4
12	186.556	141	17.325	60	6.822	4
14	186.415	140	17.385	60	6.826	4
16	186.275	138	+17.445	59	+6.830	3
18	186.137	137	17.504	58	6.833	4
20	186.000	135	17.562	57	6.837	3
22	185.865	133	17.619	56	6.840	4
24	185.732	131	17.675	54	6.844	3
26	185.601	128	+17.729	53	+6.847	3
28	185.473	124	17.782	51	6.850	3
30	185.349	121	17.833	50	6.853	3
Sept. 1	185.228	118	17.883	49	6.856	2
3	185.110	114	17.932	47	6.858	3
5	184.996	110	+17.979	45	+6.861	2
7	184.886	106	18.024	43	6.863	3
9	184.780	102	18.067	41	6.866	2
11	184.678	97	18.108	39	6.868	2
13	184.581	92	18.147	37	6.870	2
15	184.489	86	+18.184	35	+6.872	2
17	184.403	82	18.219	32	6.874	2
19	184.321	76	18.251	30	6.876	2
21	184.245	70	18.281	28	6.878	1
23	184.175		+18.309		+6.879	

0h Welt-Zeit	HYPERION U		HYPERION B		HYPERION P		0h Welt-Zeit	JAPETUS U		JAPETUS B		JAPETUS P	
1933	°		°		°		1933	°		°		°	
Sept. 23	184.175	65	+18.309	26	+6.879	2	April 20	267.033	109	+2.441	31	+0.776	29
25	184.110	59	18.335	23	6.881	1	22	267.142	104	2.410	29	0.747	27
27	184.051	53	18.358	21	6.882	1	24	267.246	98	2.381	27	0.720	26
29	183.998	47	18.379	18	6.883	1	26	267.344	93	2.354	24	0.694	24
Okt. 1	183.951	41	18.397	16	6.884	1	28	267.437	87	2.330	23	0.670	23
3	183.910	34	+18.413	13	+6.885	1	30	267.524	81	+2.307	21	+0.647	21
5	183.876	28	18.426	10	6.886	1	Mai 2	267.605	75	2.286	19	0.626	20
7	183.848	22	18.436	8	6.887	0	4	267.680	70	2.267	17	0.606	18
9	183.826	15	18.444	6	6.887	1	6	267.750	64	2.250	15	0.588	16
11	183.811	9	18.450	3	6.888	0	8	267.814	58	2.235	13	0.572	15
13	183.802	2	+18.453	0	+6.888	0	10	267.872	51	+2.222	12	+0.557	14
15	183.800	4	18.453	3	6.888	0	12	267.923	45	2.210	10	0.543	12
17	183.804	11	18.450	5	6.888	0	14	267.968	39	2.200	8	0.531	10
19	183.815	17	18.445	7	6.888	0	16	268.007	33	2.192	5	0.521	9
21	183.832	24	18.438	10	6.888	0	18	268.040	27	2.187	3	0.512	7
23	183.856	31	+18.428	13	+6.888	1	20	268.067	20	+2.184	1	+0.505	5
25	183.887	37	18.415	16	6.887	1	22	268.087	14	2.183	1	0.500	4
27	183.924	44	18.399	18	6.886	1	24	268.101	8	2.184	3	0.496	2
29	183.968	51	18.381	21	6.885	1	26	268.109	2	2.187	5	0.494	0
31	184.019	57	18.360	23	6.884	1	28	268.111	4	2.192	7	0.494	1
Nov. 2	184.076	63	+18.337	26	+6.883	1	30	268.107	10	+2.199	9	+0.495	3
4	184.139	70	18.311	28	6.882	1	Juni 1	268.097	17	2.208	11	0.498	5
6	184.209	76	18.283	31	6.881	1	3	268.080	23	2.219	13	0.503	6
8	184.285	82	18.252	33	6.880	2	5	268.057	29	2.232	15	0.509	7
10	184.367	88	18.219	36	6.878	2	7	268.028	35	2.247	17	0.516	9
12	184.455	94	+18.183	38	+6.876	2	9	267.993	41	+2.264	19	+0.525	11
14	184.549	100	18.145	41	6.874	2	11	267.952	47	2.283	20	0.536	12
16	184.649	106	18.104	43	6.872	2	13	267.905	52	2.303	22	0.548	13
18	184.755	111	18.061	45	6.870	3	15	267.853	58	2.325	24	0.561	15
20	184.866	117	18.016	47	6.867	2	17	267.795	64	2.349	26	0.576	17
22	184.983	123	+17.969	50	+6.865	3	19	267.731	69	+2.375	28	+0.593	18
24	185.106	128	17.919	52	6.862	3	21	267.662	75	2.403	29	0.611	20
26	185.234	133	17.867	54	6.859	3	23	267.587	80	2.432	31	0.631	21
28	185.367	139	17.813	56	6.856	3	25	267.507	85	2.463	33	0.652	22
30	185.506	143	17.757	59	6.853	3	27	267.422	90	2.496	34	0.674	24
Dez. 2	185.649	148	+17.698	61	+6.850	3	29	267.332	94	+2.530	36	+0.698	25
4	185.797	153	17.637	62	6.847	4	Juli 1	267.238	99	2.566	37	0.723	27
6	185.950	158	17.575	64	6.843	3	3	267.139	103	2.603	38	0.750	27
8	186.108	162	17.511	66	6.840	4	5	267.036	107	2.641	39	0.777	28
10	186.270		+17.445		+6.836		7	266.929		+2.680		+0.805	

Saturnstrabanten 1933

0h Welt-Zeit	JAPETUS					
	U		B		P	
1933	°		°		°	
Juli 7	266.929	112	+2.680	41	+0.805	29
9	266.817	116	2.721	42	0.834	31
11	266.701	119	2.763	43	0.865	31
13	266.582	122	2.806	44	0.896	32
15	266.460	125	2.850	45	0.928	33
17	266.335	129	+2.895	46	+0.961	34
19	266.206	131	2.941	46	0.995	35
21	266.075	133	2.987	47	1.030	35
23	265.942	135	3.034	47	1.065	35
25	265.807	137	3.081	48	1.100	36
27	265.670	138	+3.129	48	+1.136	37
29	265.532	139	3.177	49	1.173	37
31	265.393	141	3.226	48	1.210	37
Aug. 2	265.252	141	3.274	49	1.247	37
4	265.111	141	3.323	49	1.284	38
6	264.970	142	+3.372	48	+1.322	37
8	264.828	141	3.420	48	1.359	38
10	264.687	141	3.468	48	1.397	37
12	264.546	140	3.516	48	1.434	37
14	264.406	139	3.564	47	1.471	37
16	264.267	137	+3.611	46	+1.508	36
18	264.130	136	3.657	45	1.544	36
20	263.994	134	3.702	45	1.580	36
22	263.860	131	3.747	44	1.616	35
24	263.729	129	3.791	43	1.651	34
26	263.600	126	+3.834	42	+1.685	33
28	263.474	123	3.876	41	1.718	32
30	263.351	120	3.917	40	1.750	32
Sept. 1	263.231	116	3.957	38	1.782	31
3	263.115	112	3.995	37	1.813	30
5	263.003	108	+4.032	35	+1.843	29
7	262.895	104	4.067	34	1.872	28
9	262.791	100	4.101	33	1.900	26
11	262.691	95	4.134	31	1.926	25
13	262.596	90	4.165	29	1.951	24
15	262.506	86	+4.194	28	+1.975	23
17	262.420	80	4.222	26	1.998	21
19	262.340	75	4.248	24	2.019	20
21	262.265	69	4.272	22	2.039	19
23	262.196		+4.294		+2.058	

0h Welt-Zeit	JAPETUS					
	U		B		P	
1933	°		°		°	
Sept. 23	262.196	64	+4.294	20	+2.058	17
25	262.132	58	4.314	19	2.075	15
27	262.074	52	4.333	16	2.090	14
29	262.022	46	4.349	14	2.104	12
Okt. 1	261.976	40	4.363	12	2.116	10
3	261.936	33	+4.375	11	+2.126	9
5	261.903	27	4.386	9	2.135	7
7	261.876	21	4.395	6	2.142	6
9	261.855	15	4.401	4	2.148	4
11	261.840	9	4.405	2	2.152	2
13	261.831	2	+4.407	1	+2.154	1
15	261.829	4	4.406	2	2.155	1
17	261.833	11	4.404	4	2.154	3
19	261.844	17	4.400	6	2.151	5
21	261.861	24	4.394	9	2.146	6
23	261.885	30	+4.385	11	+2.140	8
25	261.915	37	4.374	12	2.132	10
27	261.952	43	4.362	14	2.122	11
29	261.995	50	4.348	17	2.111	13
31	262.045	56	4.331	19	2.098	15
Nov. 2	262.101	62	+4.312	20	+2.083	17
4	262.163	68	4.292	22	2.066	18
6	262.231	75	4.270	25	2.048	20
8	262.306	81	4.245	27	2.028	22
10	262.387	87	4.218	28	2.006	23
12	262.474	92	+4.190	30	+1.983	24
14	262.566	99	4.160	32	1.959	26
16	262.665	104	4.128	34	1.933	28
18	262.769	110	4.094	36	1.905	29
20	262.879	115	4.058	38	1.876	30
22	262.994	121	+4.020	40	+1.846	32
24	263.115	126	3.980	41	1.814	34
26	263.241	132	3.939	43	1.780	35
28	263.373	137	3.896	44	1.745	36
30	263.510	142	3.852	46	1.709	38
Dez. 2	263.652	147	+3.806	47	+1.671	39
4	263.799	151	3.759	49	1.632	40
6	263.950	156	3.710	50	1.592	41
8	264.106	161	3.660	52	1.551	43
10	264.267		+3.608		+1.508	

0^h Welt-Zeit	HYPERION $\alpha_{tr}-\alpha_{pl}$		$\delta_{tr}-\delta_{pl}$	
1933	s	s	"	"
April 20	+14.7	−0.8	−23	−14
21	+13.9	−1.9	−37	−11
22	+12.0	−2.9	−48	− 7
23	+ 9.1	−3.7	−55	− 2
24	+ 5.4	−4.2	−57	+ 3
25	+ 1.2	−4.4	−54	+ 9
26	− 3.2	−4.1	−45	+14
27	− 7.3	−3.2	−31	+18
28	−10.5	−2.1	−13	+19
29	−12.6	−0.7	+ 6	+19
30	−13.3	+0.7	+25	+16
Mai 1	−12.6	+1.9	+41	+12
2	−10.7	+2.9	+53	+ 7
3	− 7.8	+3.5	+60	+ 3
4	− 4.3	+3.8	+63	− 2
5	− 0.5	+3.9	+61	− 7
6	+ 3.4	+3.7	+54	−11
7	+ 7.1	+3.2	+43	−13
8	+10.3	+2.5	+30	−15
9	+12.8	+1.7	+15	−17
10	+14.5	+0.7	− 2	−16
11	+15.2	−0.4	−18	−15
12	+14.8	−1.6	−33	−13
13	+13.2	−2.6	−46	− 9
14	+10.6	−3.6	−55	− 4
15	+ 7.0	−4.3	−59	+ 2
16	+ 2.7	−4.6	−57	+ 8
17	− 1.9	−4.4	−49	+13
18	− 6.3	−3.7	−36	+17
19	−10.0	−2.5	−19	+19
20	−12.5	−1.2	0	+20
21	−13.7	+0.2	+20	+17
22	−13.5	+1.6	+37	+14
23	−11.9	+2.7	+51	+ 9
24	− 9.2	+3.4	+60	+ 5
25	− 5.8	+3.9	+65	− 1
26	− 1.9	+4.1	+64	− 6
27	+ 2.2	+3.9	+58	− 9
28	+ 6.1	+3.5	+49	−13
29	+ 9.6		+36	

0^h Welt-Zeit	HYPERION $\alpha_{tr}-\alpha_{pl}$		$\delta_{tr}-\delta_{pl}$	
1933	s	s	"	"
Mai 29	+ 9.6	+2.9	+36	−15
30	+12.5	+2.0	+21	−17
31	+14.5	+1.1	+ 4	−17
Juni 1	+15.6	0.0	−13	−16
2	+15.6	−1.3	−29	−14
3	+14.3	−2.4	−43	−11
4	+11.9	−3.4	−54	− 6
5	+ 8.5	−4.3	−60	0
6	+ 4.2	−4.7	−60	+ 6
7	− 0.5	−4.7	−54	+12
8	− 5.2	−4.1	−42	+16
9	− 9.3	−3.0	−26	+20
10	−12.3	−1.7	− 6	+20
11	−14.0	−0.2	+14	+19
12	−14.2	+1.3	+33	+16
13	−12.9	+2.4	+49	+12
14	−10.5	+3.3	+61	+ 6
15	− 7.2	+3.9	+67	0
16	− 3.3	+4.2	+67	− 4
17	+ 0.9	+4.2	+63	− 8
18	+ 5.1	+3.8	+55	−12
19	+ 8.9	+3.2	+43	−16
20	+12.1	+2.4	+27	−17
21	+14.5	+1.4	+10	−18
22	+15.9	+0.3	− 8	−17
23	+16.2	−0.9	−25	−16
24	+15.3	−2.1	−41	−12
25	+13.2	−3.3	−53	− 8
26	+ 9.9	−4.2	−61	− 2
27	+ 5.7	−4.8	−63	+ 4
28	+ 0.9	−4.9	−59	+10
29	− 4.0	−4.4	−49	+16
30	− 8.4	−3.5	−33	+20
Juli 1	−11.9	−2.2	−13	+22
2	−14.1	−0.6	+ 9	+20
3	−14.7	+0.9	+29	+18
4	−13.8	+2.2	+47	+13
5	−11.6	+3.2	+60	+ 9
6	− 8.4	+3.9	+69	+ 2
7	− 4.5		+71	

0^h Welt-Zeit	HYPERION $\alpha_{tr}-\alpha_{pl}$		$\delta_{tr}-\delta_{pl}$	
1933	s	s	"	"
Juli 7	− 4.5	+4.2	+71	− 2
8	− 0.3	+4.3	+69	− 8
9	+ 4.0	+4.0	+61	−12
10	+ 8.0	+3.5	+49	−15
11	+11.5	+2.7	+34	−17
12	+14.2	+1.8	+17	−19
13	+16.0	+0.7	− 2	−19
14	+16.7	−0.6	−21	−17
15	+16.1	−1.9	−38	−14
16	+14.2	−3.0	−52	−10
17	+11.2	−4.1	−62	− 5
18	+ 7.1	−4.8	−67	+ 3
19	+ 2.3	−5.0	−64	+ 9
20	− 2.7	−4.7	−55	+15
21	− 7.4	−3.9	−40	+20
22	−11.3	−2.6	−20	+22
23	−13.9	−1.1	+ 2	+22
24	−15.0	+0.5	+24	+20
25	−14.5	+1.9	+44	+15
26	−12.6	+3.0	+59	+11
27	− 9.6	+3.8	+70	+ 4
28	− 5.8	+4.3	+74	− 1
29	− 1.5	+4.4	+73	− 6
30	+ 2.9	+4.2	+67	−11
31	+ 7.1	+3.7	+56	−15
Aug. 1	+10.8	+3.0	+41	−18
2	+13.8	+2.0	+23	−19
3	+15.8	+1.0	+ 4	−19
4	+16.8	−0.2	−15	−19
5	+16.6	−1.5	−34	−16
6	+15.1	−2.8	−50	−12
7	+12.3	−3.9	−62	− 6
8	+ 8.4	−4.6	−68	0
9	+ 3.8	−5.1	−68	+ 7
10	− 1.3	−4.9	−61	+14
11	− 6.2	−4.2	−47	+19
12	−10.4	−3.0	−28	+23
13	−13.4	−1.5	− 5	+23
14	−14.9	+0.1	+18	+21
15	−14.8		+39	

Saturnstrabanten 1933

0h Welt-Zeit	HYPERION $\alpha_{tr} - \alpha_{pl}$		HYPERION $\delta_{tr} - \delta_{pl}$	
1933	s	s	"	"
Aug. 15	−14.8	+1.5	+39	+18
16	−13.3	+2.8	+57	+12
17	−10.5	+3.6	+69	+ 7
18	− 6.9	+4.2	+76	+ 1
19	− 2.7	+4.4	+77	− 5
20	+ 1.7	+4.2	+72	−10
21	+ 5.9	+3.9	+62	−14
22	+ 9.8	+3.2	+48	−18
23	+13.0	+2.3	+30	−19
24	+15.3	+1.3	+11	−20
25	+16.6	+0.1	− 9	−20
26	+16.7	−1.1	−29	−17
27	+15.6	−2.5	−46	−14
28	+13.1	−3.5	−60	− 9
29	+ 9.6	−4.4	−69	− 2
30	+ 5.2	−5.0	−71	+ 6
31	+ 0.2	−4.9	−65	+12
Sept. 1	− 4.7	−4.5	−53	+18
2	− 9.2	−3.3	−35	+22
3	−12.5	−1.9	−13	+24
4	−14.4	−0.4	+11	+22
5	−14.8	+1.1	+33	+19
6	−13.7	+2.4	+52	+15
7	−11.3	+3.3	+67	+ 8
8	− 8.0	+4.0	+75	+ 3
9	− 4.0	+4.3	+78	− 3
10	+ 0.3	+4.3	+75	− 9
11	+ 4.6	+3.9	+66	−13
12	+ 8.5	+3.4	+53	−16
13	+11.9	+2.6	+37	−19
14	+14.5	+1.5	+18	−20
15	+16.0	+0.5	− 2	−20
16	+16.5	−0.7	−22	−19
17	+15.8	−2.0	−41	−15
18	+13.8	−3.2	−56	−10
19	+10.6	−4.1	−66	− 5
20	+ 6.5	−4.7	−71	+ 3
21	+ 1.8	−4.9	−68	+10
22	− 3.1	−4.6	−58	+16
23	− 7.7		−42	

0h Welt-Zeit	HYPERION $\alpha_{tr} - \alpha_{pl}$		HYPERION $\delta_{tr} - \delta_{pl}$	
1933	s	s	"	"
Sept. 23	− 7.7	−3.6	−42	+21
24	−11.3	−2.4	−21	+23
25	−13.7	−0.8	+ 2	+23
26	−14.5	+0.6	+25	+21
27	−13.9	+1.9	+46	+16
28	−12.0	+3.0	+62	+10
29	− 9.0	+3.8	+72	+ 5
30	− 5.2	+4.1	+77	− 1
Okt. 1	− 1.1	+4.2	+76	− 7
2	+ 3.1	+3.9	+69	−11
3	+ 7.0	+3.5	+58	−15
4	+10.5	+2.8	+43	−18
5	+13.3	+1.9	+25	−20
6	+15.2	+0.8	+ 5	−20
7	+16.0	−0.3	−15	−18
8	+15.7	−1.5	−33	−16
9	+14.2	−2.7	−49	−12
10	+11.5	−3.7	−61	− 7
11	+ 7.8	−4.4	−68	0
12	+ 3.4	−4.8	−68	+ 7
13	− 1.4	−4.5	−61	+14
14	− 5.9	−3.9	−47	+19
15	− 9.8	−2.8	−28	+22
16	−12.6	−1.4	− 6	+22
17	−14.0	+0.1	+16	+21
18	−13.9	+1.5	+37	+18
19	−12.4	+2.5	+55	+12
20	− 9.9	+3.4	+67	+ 6
21	− 6.5	+3.8	+73	+ 1
22	− 2.7	+4.1	+74	− 4
23	+ 1.4	+3.9	+70	− 9
24	+ 5.3	+3.5	+61	−14
25	+ 8.8	+3.0	+47	−16
26	+11.8	+2.2	+31	−18
27	+14.0	+1.2	+13	−19
28	+15.2	+0.1	− 6	−19
29	+15.3	−1.0	−25	−17
30	+14.3	−2.1	−42	−13
31	+12.2	−3.2	−55	− 8
Nov. 1	+ 9.0		−63	

0h Welt-Zeit	HYPERION $\alpha_{tr} - \alpha_{pl}$		HYPERION $\delta_{tr} - \delta_{pl}$	
1933	s	s	"	"
Nov. 1	+ 9.0	−4.0	−63	− 3
2	+ 5.0	−4.5	−66	+ 4
3	+ 0.5	−4.5	−62	+11
4	− 4.0	−4.1	−51	+17
5	− 8.1	−3.1	−34	+20
6	−11.2	−1.9	−14	+21
7	−13.1	−0.5	+ 7	+21
8	−13.6	+0.9	+28	+18
9	−12.7	+2.0	+46	+14
10	−10.7	+2.9	+60	+ 8
11	− 7.8	+3.6	+68	+ 3
12	− 4.2	+3.8	+71	− 2
13	− 0.4	+3.8	+69	− 7
14	+ 3.4	+3.6	+62	−11
15	+ 7.0	+3.2	+51	−14
16	+10.2	+2.4	+37	−17
17	+12.6	+1.6	+20	−18
18	+14.2	+0.6	+ 2	−18
19	+14.8	−0.5	−16	−17
20	+14.3	−1.6	−33	−14
21	+12.7	−2.6	−47	−10
22	+10.1	−3.6	−57	− 5
23	+ 6.5	−4.2	−62	+ 1
24	+ 2.3	−4.4	−61	+ 8
25	− 2.1	−4.2	−53	+14
26	− 6.3	−3.4	−39	+18
27	− 9.7	−2.4	−21	+20
28	−12.1	−1.1	− 1	+20
29	−13.2	+0.3	+19	+18
30	−12.9	+1.5	+37	+15
Dez. 1	−11.4	+2.5	+52	+10
2	− 8.9	+3.1	+62	+ 5
3	− 5.8	+3.6	+67	0
4	− 2.2	+3.7	+67	− 5
5	+ 1.5	+3.6	+62	− 9
6	+ 5.1	+3.3	+53	−12
7	+ 8.4	+2.7	+41	−15
8	+11.1	+2.0	+26	−17
9	+13.1	+1.0	+ 9	−17
10	+14.1		− 8	

0h Welt-Zeit	JAPETUS $\alpha_{tr}-\alpha_{pl}$	Diff.	JAPETUS $\delta_{tr}-\delta_{pl}$	Diff.
1933	s	s	"	"
April 20	−24.5	−3.5	−10	+4
22	−28.0	−2.8	− 6	+3
24	−30.8	−2.1	− 3	+3
26	−32.9	−1.4	0	+2
28	−34.3	−0.6	+ 2	+3
30	−34.9	+0.2	+ 5	+3
Mai 2	−34.7	+1.0	+ 8	+3
4	−33.7	+1.8	+11	+2
6	−31.9	+2.6	+13	+2
8	−29.3	+3.3	+15	+2
10	−26.0	+4.0	+17	+1
12	−22.0	+4.6	+18	+1
14	−17.4	+5.0	+19	0
16	−12.4	+5.4	+19	0
18	− 7.0	+5.6	+19	0
20	− 1.4	+5.7	+19	−1
22	+ 4.3	+5.6	+18	−1
24	+ 9.9	+5.4	+17	−2
26	+15.3	+5.0	+15	−2
28	+20.3	+4.5	+13	−3
30	+24.8	+3.9	+10	−3
Juni 1	+28.7	+3.1	+ 7	−3
3	+31.8	+2.3	+ 4	−3
5	+34.1	+1.3	+ 1	−3
7	+35.4	+0.4	− 2	−4
9	+35.8	−0.6	− 6	−3
11	+35.2	−1.5	− 9	−3
13	+33.7	−2.4	−12	−3
15	+31.3	−3.3	−15	−3
17	+28.0	−4.0	−18	−2
19	+24.0	−4.7	−20	−2
21	+19.3	−5.1	−22	−1
23	+14.2	−5.5	−23	−1
25	+ 8.7	−5.8	−24	0
27	+ 2.9	−5.9	−24	+1
29	− 3.0	−5.9	−23	+1
Juli 1	− 8.9	−5.7	−22	+2
3	−14.6	−5.3	−20	+2
5	−19.9	−4.9	−18	+3
7	−24.8		−15	

0h Welt-Zeit	JAPETUS $\alpha_{tr}-\alpha_{pl}$	Diff.	JAPETUS $\delta_{tr}-\delta_{pl}$	Diff.
1933	s	s	"	"
Juli 7	−24.8	−4.3	−15	+3
9	−29.1	−3.7	−12	+4
11	−32.8	−2.9	− 8	+5
13	−35.7	−2.1	− 3	+4
15	−37.8	−1.1	+ 1	+5
17	−38.9	−0.2	+ 6	+5
19	−39.1	+0.8	+11	+4
21	−38.3	+1.7	+15	+5
23	−36.6	+2.6	+20	+4
25	−34.0	+3.5	+24	+3
27	−30.5	+4.3	+27	+3
29	−26.2	+5.0	+30	+2
31	−21.2	+5.5	+32	+1
Aug. 2	−15.7	+5.9	+33	0
4	− 9.8	+6.2	+33	0
6	− 3.6	+6.3	+33	−2
8	+ 2.7	+6.2	+31	−3
10	+ 8.9	+6.0	+28	−4
12	+14.9	+5.6	+24	−4
14	+20.5	+5.0	+20	−5
16	+25.5	+4.3	+15	−6
18	+29.8	+3.4	+ 9	−6
20	+33.2	+2.5	+ 3	−7
22	+35.7	+1.5	− 4	−7
24	+37.2	+0.4	−11	−6
26	+37.6	−0.6	−17	−6
28	+37.0	−1.6	−23	−5
30	+35.4	−2.6	−28	−5
Sept. 1	+32.8	−3.4	−33	−4
3	+29.4	−4.2	−37	−3
5	+25.2	−4.8	−40	−2
7	+20.4	−5.3	−42	−1
9	+15.1	−5.7	−43	0
11	+ 9.4	−5.9	−43	+1
13	+ 3.5	−6.0	−42	+3
15	− 2.5	−5.9	−39	+4
17	− 8.4	−5.6	−35	+4
19	−14.0	−5.2	−31	+5
21	−19.2	−4.8	−26	+6
23	−24.0		−20	

0h Welt-Zeit	JAPETUS $\alpha_{tr}-\alpha_{pl}$	Diff.	JAPETUS $\delta_{tr}-\delta_{pl}$	Diff.
1933	s	s	"	"
Sept. 23	−24.0	−4.2	−20	+6
25	−28.2	−3.5	−14	+7
27	−31.7	−2.8	− 7	+7
29	−34.5	−1.9	0	+7
Okt. 1	−36.4	−1.0	+ 7	+7
3	−37.4	−0.2	+14	+6
5	−37.6	+0.7	+20	+6
7	−36.9	+1.6	+26	+5
9	−35.3	+2.5	+31	+4
11	−32.8	+3.2	+35	+4
13	−29.6	+3.9	+39	+3
15	−25.7	+4.5	+42	+1
17	−21.2	+5.0	+43	0
19	−16.2	+5.4	+43	−1
21	−10.8	+5.6	+42	−2
23	− 5.2	+5.7	+40	−3
25	+ 0.5	+5.7	+37	−4
27	+ 6.2	+5.4	+33	−4
29	+11.6	+5.1	+29	−5
31	+16.7	+4.7	+24	−6
Nov. 2	+21.4	+4.0	+18	−6
4	+25.4	+3.3	+12	−7
6	+28.7	+2.5	+ 5	−6
8	+31.2	+1.6	− 1	−7
10	+32.8	+0.8	− 8	−6
12	+33.6	−0.1	−14	−6
14	+33.5	−0.9	−20	−5
16	+32.6	−1.8	−25	−4
18	+30.8	−2.6	−29	−3
20	+28.2	−3.3	−32	−2
22	+24.9	−3.9	−34	−1
24	+21.0	−4.3	−35	−1
26	+16.7	−4.7	−36	0
28	+12.0	−4.9	−36	+1
30	+ 7.1	−5.1	−35	+1
Dez. 2	+ 2.0	−5.1	−34	+2
4	− 3.1	−5.0	−32	+4
6	− 8.1	−4.8	−28	+4
8	−12.9	−4.5	−24	+4
10	−17.4		−20	

Östliche Elongationen (in Welt-Zeit)

MIMAS

		h			h			h			h
April	20	6.7	Mai	31	17.9	Juli	12	5.0	Aug.	22	16.0
	21	5.4	Juni	1	16.5		13	3.6		23	14.7
	22	4.0		2	15.1		14	2.3		24	13.3
	23	2.6		3	13.7		15	0.9		25	11.9
	24	1.2		4	12.4		15	23.5		26	10.5
	24	23.8		5	11.0		16	22.1		27	9.2
	25	22.5		6	9.6		17	20.7		28	7.8
	26	21.1		7	8.2		18	19.3		29	6.4
	27	19.7		8	6.9		19	17.9		30	5.0
	28	18.3		9	5.5		20	16.5		31	3.6
	29	16.9		10	4.1		21	15.1	Sept.	1	2.3
	30	15.5		11	2.7		22	13.8		2	0.9
Mai	1	14.1		12	1.3		23	12.4		2	23.5
	2	12.7		13	0.0		24	11.0		3	22.1
	3	11.4		13	22.6		25	9.6		4	20.7
	4	10.0		14	21.2		26	8.2		5	19.3
	5	8.6		15	19.8		27	6.8		6	17.9
	6	7.2		16	18.4		28	5.4		7	16.5
	7	5.9		17	17.0		29	4.0		8	15.2
	8	4.5		18	15.6		30	2.7		9	13.8
	9	3.1		19	14.2		31	1.3		10	12.4
	10	1.7		20	12.9		31	23.9		11	11.0
	11	0.3		21	11.5	Aug.	1	22.5		12	9.7
	11	23.0		22	10.1		2	21.1		13	8.3
	12	21.6		23	8.7		3	19.7		14	6.9
	13	20.2		24	7.4		4	18.3		15	5.5
	14	18.8		25	6.0		5	16.9		16	4.1
	15	17.4		26	4.6		6	15.5		17	2.8
	16	16.0		27	3.2		7	14.2		18	1.4
	17	14.6		28	1.8		8	12.8		19	0.0
	18	13.2		29	0.5		9	11.4		19	22.6
	19	11.9		29	23.1		10	10.0		20	21.2
	20	10.5		30	21.7		11	8.7		21	19.8
	21	9.1	Juli	1	20.3		12	7.3		22	18.4
	22	7.7		2	18.9		13	5.9		23	17.0
	23	6.4		3	17.5		14	4.5		24	15.7
	24	5.0		4	16.1		15	3.1		25	14.3
	25	3.6		5	14.7		16	1.8		26	12.9
	26	2.2		6	13.4		17	0.4		27	11.5
	27	0.8		7	12.0		17	23.0		28	10.2
	27	23.5		8	10.6		18	21.6		29	8.8
	28	22.1		9	9.2		19	20.2		30	7.4
	29	20.7		10	7.8		20	18.8	Okt.	1	6.0
	30	19.3		11	6.4		21	17.4		2	4.6

Östliche Elongationen (in Welt-Zeit)

MIMAS

		h
Okt.	3	3.3
	4	1.9
	5	0.5
	5	23.1
	6	21.7
	7	20.3
	8	18.9
	9	17.5
	10	16.2
	11	14.8
	12	13.4
	13	12.0
	14	10.7
	15	9.3
	16	7.9
	17	6.5
	18	5.1
	19	3.8
	20	2.4
	21	1.0
	21	23.6
	22	22.2
	23	20.8
	24	19.5
	25	18.1
	26	16.7
	27	15.3
	28	14.0
	29	12.6
	30	11.2
	31	9.8
Nov.	1	8.5
	2	7.1
	3	5.7
	4	4.3
	5	3.0
	6	1.6
	7	0.2
	7	22.8
	8	21.4
	9	20.1
	10	18.7
	11	17.3
	12	15.9

MIMAS

		h
Nov.	13	14.6
	14	13.2
	15	11.8
	16	10.4
	17	9.1
	18	7.7
	19	6.3
	20	4.9
	21	3.6
	22	2.2
	23	0.8
	23	23.4
	24	22.0
	25	20.7
	26	19.3
	27	17.9
	28	16.5
	29	15.2
	30	13.8
Dez.	1	12.4
	2	11.0
	3	9.7
	4	8.3
	5	6.9
	6	5.5
	7	4.2
	8	2.8
	9	1.4
	10	0.0

ENCELADUS

		h
April	20	10.9
	21	19.7
	23	4.6
	24	13.5
	25	22.4
	27	7.3
	28	16.2
	30	1.1
Mai	1	10.0
	2	18.9

ENCELADUS

		h
Mai	4	3.7
	5	12.6
	6	21.5
	8	6.4
	9	15.3
	11	0.2
	12	9.0
	13	17.9
	15	2.8
	16	11.7
	17	20.6
	19	5.4
	20	14.3
	21	23.2
	23	8.1
	24	17.0
	26	1.9
	27	10.7
	28	19.6
	30	4.5
	31	13.4
Juni	1	22.3
	3	7.2
	4	16.0
	6	0.9
	7	9.8
	8	18.7
	10	3.6
	11	12.5
	12	21.3
	14	6.2
	15	15.1
	17	0.0
	18	8.9
	19	17.8
	21	2.6
	22	11.5
	23	20.4
	25	5.3
	26	14.2
	27	23.1
	29	7.9
	30	16.8
Juli	2	1.7

ENCELADUS

		h
Juli	3	10.6
	4	19.4
	6	4.3
	7	13.2
	8	22.1
	10	6.9
	11	15.8
	13	0.7
	14	9.6
	15	18.4
	17	3.3
	18	12.2
	19	21.0
	21	5.9
	22	14.8
	23	23.7
	25	8.5
	26	17.4
	28	2.3
	29	11.2
	30	20.0
Aug.	1	4.9
	2	13.8
	3	22.7
	5	7.5
	6	16.4
	8	1.3
	9	10.2
	10	19.0
	12	3.9
	13	12.8
	14	21.7
	16	6.5
	17	15.4
	19	0.3
	20	9.2
	21	18.1
	23	2.9
	24	11.8
	25	20.7
	27	5.6
	28	14.5
	29	23.4
	31	8.2

Östliche Elongationen (in Welt-Zeit)

ENCELADUS

		h
Sept.	1	17.1
	3	2.0
	4	10.9
	5	19.8
	7	4.7
	8	13.5
	9	22.4
	11	7.3
	12	16.2
	14	1.1
	15	10.0
	16	18.8
	18	3.7
	19	12.6
	20	21.5
	22	6.4
	23	15.3
	25	0.1
	26	9.0
	27	17.9
	29	2.8
	30	11.7
Okt.	1	20.6
	3	5.4
	4	14.3
	5	23.2
	7	8.1
	8	17.0
	10	1.9
	11	10.7
	12	19.6
	14	4.5
	15	13.4
	16	22.3
	18	7.2
	19	16.0
	21	0.9
	22	9.8
	23	18.7
	25	3.6
	26	12.5
	27	21.4
	29	6.3
	30	15.1

ENCELADUS

		h
Nov.	1	0.0
	2	8.9
	3	17.8
	5	2.7
	6	11.6
	7	20.5
	9	5.4
	10	14.3
	11	23.2
	13	8.1
	14	17.0
	16	1.8
	17	10.7
	18	19.6
	20	4.5
	21	13.4
	22	22.3
	24	7.2
	25	16.1
	27	1.0
	28	9.9
	29	18.8
Dez.	1	3.7
	2	12.6
	3	21.5
	5	6.4
	6	15.3
	8	0.2
	9	9.1
	10	18.0

TETHYS

		h
April	20	22.8
	22	20.2
	24	17.5
	26	14.8
	28	12.1
	30	9.4
Mai	2	6.7
	4	4.0
	6	1.3

TETHYS

		h
Mai	7	22.7
	9	20.0
	11	17.3
	13	14.6
	15	11.9
	17	9.2
	19	6.5
	21	3.8
	23	1.1
	24	22.4
	26	19.7
	28	17.0
	30	14.3
Juni	1	11.6
	3	8.9
	5	6.2
	7	3.5
	9	0.8
	10	22.1
	12	19.4
	14	16.7
	16	14.0
	18	11.3
	20	8.6
	22	5.9
	24	3.2
	26	0.5
	27	21.8
	29	19.1
Juli	1	16.4
	3	13.7
	5	11.0
	7	8.3
	9	5.6
	11	2.8
	13	0.1
	14	21.4
	16	18.7
	18	16.0
	20	13.3
	22	10.6
	24	7.9
	26	5.2
	28	2.4

TETHYS

		h
Juli	29	23.7
	31	21.0
Aug.	2	18.3
	4	15.6
	6	12.9
	8	10.2
	10	7.5
	12	4.8
	14	2.1
	15	23.4
	17	20.7
	19	18.0
	21	15.3
	23	12.6
	25	9.9
	27	7.2
	29	4.4
	31	1.7
Sept.	1	23.0
	3	20.3
	5	17.6
	7	14.9
	9	12.2
	11	9.5
	13	6.8
	15	4.1
	17	1.4
	18	22.7
	20	20.0
	22	17.3
	24	14.6
	26	11.9
	28	9.2
	30	6.5
Okt.	2	3.8
	4	1.1
	5	22.4
	7	19.7
	9	17.0
	11	14.3
	13	11.6
	15	9.0
	17	6.3
	19	3.6

Östliche Elongationen (in Welt-Zeit)

TETHYS

Monat	Tag	h
Okt.	21	0.9
	22	22.2
	24	19.5
	26	16.8
	28	14.1
	30	11.4
Nov.	1	8.8
	3	6.1
	5	3.4
	7	0.7
	8	22.0
	10	19.4
	12	16.7
	14	14.0
	16	11.3
	18	8.6
	20	6.0
	22	3.3
	24	0.6
	25	22.0
	27	19.3
	29	16.6
Dez.	1	14.0
	3	11.3
	5	8.6
	7	6.0
	9	3.3
	11	0.6

DIONE

Monat	Tag	h
April	22	1.4
	24	19.1
	27	12.8
	30	6.5
Mai	3	0.2
	5	17.9
	8	11.6
	11	5.3
	13	23.0
	16	16.7
	19	10.4
	22	4.1
Mai	24	21.7
	27	15.4
	30	9.1
Juni	2	2.8
	4	20.5
	7	14.2
	10	7.8
	13	1.5
	15	19.2
	18	12.9
	21	6.6
	24	0.2
	26	17.9
	29	11.5
Juli	2	5.2
	4	22.8
	7	16.5
	10	10.1
	13	3.8
	15	21.4
	18	15.1
	21	8.7
	24	2.4
	26	20.0
	29	13.7
Aug.	1	7.3
	4	1.0
	6	18.6
	9	12.3
	12	5.9
	14	23.6
	17	17.2
	20	10.9
	23	4.6
	25	22.2
	28	15.9
	31	9.5
Sept.	3	3.2
	5	20.9
	8	14.6
	11	8.2
	14	1.9
	16	19.5
	19	13.2
Sept.	22	6.9
	25	0.6
	27	18.2
	30	11.9
Okt.	3	5.5
	5	23.2
	8	16.9
	11	10.6
	14	4.3
	16	22.0
	19	15.7
	22	9.4
	25	3.1
	27	20.8
	30	14.5
Nov.	2	8.2
	5	1.9
	7	19.6
	10	13.3
	13	7.0
	16	0.7
	18	18.5
	21	12.2
	24	5.9
	26	23.6
	29	17.3
Dez.	2	11.0
	5	4.8
	7	22.5
	10	16.2

RHEA

Monat	Tag	h
April	22	12.7
	27	1.1
Mai	1	13.6
	6	2.1
	10	14.5
	15	3.0
	19	15.4
	24	3.9
	28	16.3
Juni	2	4.7
	6	17.1
	11	5.4
	15	17.8
	20	6.2
	24	18.6
	29	6.9
Juli	3	19.3
	8	7.6
	12	20.0
	17	8.3
	21	20.6
	26	9.0
	30	21.3
Aug.	4	9.6
	8	22.0
	13	10.3
	17	22.7
	22	11.0
	26	23.3
	31	11.6
Sept.	4	23.9
	9	12.3
	14	0.7
	18	13.0
	23	1.4
	27	13.8
Okt.	2	2.1
	6	14.5
	11	2.9
	15	15.4
	20	3.8
	24	16.2
	29	4.7
Nov.	2	17.1
	7	5.6
	11	18.1
	16	6.6
	20	19.1
	25	7.6
	29	20.1
Dez.	4	8.6
	8	21.2
	13	9.7

Elongationen und Konjunktionen (in Welt-Zeit)

TITAN

		h	
April	22	3.7	Westl. El.
	25	23.2	Ob. Konj.
	29	21.0	Östl. El.
Mai	4	1.2	Unt. Konj.
	8	3.0	West. El.
	11	22.4	Ob. Konj.
	15	20.2	Östl. El.
	20	0.3	Unt. Konj.
	24	2.0	Westl. El.
	27	21.2	Ob. Konj.
	31	18.9	Östl. El.
Juni	4	23.0	Unt. Konj.
	9	0.6	Westl. El.
	12	19.6	Ob. Konj.
	16	17.3	Östl. El.
	20	21.2	Unt. Konj.
	24	22.7	Westl. El.
	28	17.8	Ob. Konj.
Juli	2	15.3	Östl. El.
	6	19.0	Unt. Konj.
	10	20.5	Westl. El.
	14	15.6	Ob. Konj.
	18	12.9	Östl. El.
	22	16.6	Unt. Konj.
	26	18.1	Westl. El.
	30	13.2	Ob. Konj.
Aug.	3	10.5	Östl. El.
	7	14.0	Unt. Konj.
	11	15.5	Westl. El.
	15	10.8	Ob. Konj.
	19	8.0	Östl. El.
	23	11.5	Unt. Konj.
	27	13.1	Westl. El.
	31	8.5	Ob. Konj.
Sept.	4	5.7	Östl. El.
	8	9.1	Unt. Konj.
	12	10.8	Westl. El.
	16	6.4	Ob. Konj.
	20	3.6	Östl. El.
	24	7.1	Unt. Konj.
	28	8.9	Westl. El.
Okt.	2	4.6	Ob. Konj.
	6	1.8	Östl. El.
	10	5.4	Unt. Konj.
	14	7.4	Westl. El.
	18	3.2	Ob. Konj.
	22	0.5	Östl. El.
	26	4.3	Unt. Konj.
	30	6.3	Westl. El.
Nov.	3	2.2	Ob. Konj.
	6	23.7	Östl. El.
	11	3.6	Unt. Konj.
	15	5.7	Westl. El.
	19	1.6	Ob. Konj.
	22	23.3	Östl. El.
	27	3.3	Unt. Konj.
Dez.	1	5.5	Westl. El.
	5	1.4	Ob. Konj.
	8	23.2	Östl. El.

HYPERION

		h	
April	20	4.5	Östl. El.
	25	10.0	Unt. Konj.
	29	22.3	Westl. El.
Mai	5	7.4	Ob. Konj.
	11	13.0	Östl. El.
	16	17.6	Unt. Konj.
	21	5.9	Westl. El.
	26	15.4	Ob. Konj.
Juni	1	20.9	Östl. El.
	7	1.0	Unt. Konj.
	11	13.1	Westl. El.
	16	22.8	Ob. Konj.
	23	4.3	Östl. El.
	28	8.0	Unt. Konj.
Juli	2	20.0	Westl. El.
	8	5.8	Ob. Konj.
	14	11.2	Östl. El.
	19	14.8	Unt. Konj.
	24	2.7	Westl. El.
	29	12.6	Ob. Konj.
Aug.	4	18.0	Östl. El.
	9	21.6	Unt. Konj.
	14	9.6	Westl. El.
	19	19.5	Ob. Konj.
	26	1.0	Östl. El.
	31	4.8	Unt. Konj.
Sept.	4	16.9	Westl. El.
	10	2.9	Ob. Konj.
	16	8.7	Östl. El.
	21	12.6	Unt. Konj.
	26	0.8	Westl. El.
Okt.	1	11.3	Ob. Konj.
	7	17.3	Östl. El.
	12	21.2	Unt. Konj.
	17	9.7	Westl. El.
	22	20.8	Ob. Konj.
	29	2.9	Östl. El.
Nov.	3	6.6	Unt. Konj.
	7	19.6	Westl. El.
	13	7.5	Ob. Konj.
	19	13.5	Östl. El.
	24	16.6	Unt. Konj.
	29	6.0	Westl. El.
Dez.	4	18.7	Ob. Konj.

JAPETUS

		h	
April	30	15.2	Westl. El.
Mai	20	13.2	Ob. Konj.
Juni	8	8.2	Östl. El.
	28	0.8	Unt. Konj.
Juli	18	15.7	Westl. El.
Aug.	7	4.9	Ob. Konj.
	25	17.9	Östl. El.
Sept.	14	6.1	Unt. Konj.
Okt.	4	23.8	Westl. El.
	24	21.5	Ob. Konj.
Nov.	12	20.3	Östl. El.
Dez.	2	20.5	Unt. Konj.

Welt-Zeit 1933	h	
Jan. 3	19	☉ in Erdnähe
4	9	⛢ ☌ ☾
8	17	♃ stationär
15	17	♆ ☌ ☾
16	14	♂ ☌ ☾
16	18	♃ ☌ ☾
18	7	☿ im Aphel
22	2	♂ stationär
24	8	♀ ☌ ☾
25	6	☿ ☌ ☾
26	1	♄ ☌ ☾
27	13	♄ ☌ ☉
31	18	⛢ ☌ ☾
Febr. 1	9	☿ ☌ ♄, ☿ 1° 32′ S.
8	0	☿ obere ☌ ☉
11	22	♆ ☌ ☾
12	15	♂ ☌ ☾
12	21	♃ ☌ ☾
14	21	♀ ☌ ♄, ♀ 0° 12′ S.
16	3	♂ im Aphel
22	15	♄ ☌ ☾
23	9	♀ ☌ ☾
24	—	☉ ringf. Finsternis
25	18	☿ ☌ ☾
27	20	♆ ☍ ☉
28	5	⛢ ☌ ☾
März 1	20	♂ ☍ ☉
2	3	♀ im Aphel
3	7	☿ im Perihel
3	13	♂ in Erdnähe
6	20	☿ gr. östl. El. 18° 14′
9	8	♃ ☍ ☉
11	5	♂ ☌ ♆, ♂ 3° 28′ N.
11	5	♂ ☌ ☾
11	5	♆ ☌ ☾
11	23	♃ ☌ ☾
13	9	☿ stationär
21	2	Frühlingsanfang
22	3	♄ ☌ ☾
23	8	☿ untere ☌ ☉
25	16	♀ ☌ ☾
25	17	☿ ☌ ☾
26	1	☿ ☌ ♀, ☿ 4° 35′ N.
27	16	⛢ ☌ ☾

Welt-Zeit 1933	h	
April 4	19	☿ stationär
7	3	♂ ☌ ☾
7	14	♆ ☌ ☾
8	4	♃ ☌ ☾
13	10	♂ stationär
13	18	⛢ ☌ ☉
15	7	♀ ☌ ⛢, ♀ 0° 39′ S.
16	6	☿ im Aphel
18	12	♄ ☌ ☾
20	7	☿ gr. westl. El. 27° 25′
21	16	♀ obere ☌ ☉
22	14	☿ ☌ ☾
24	2	⛢ ☌ ☾
25	1	♀ ☌ ☾
Mai 4	17	♂ ☌ ☾
4	23	♆ ☌ ☾
5	11	♃ ☌ ☾
6	15	☿ ☌ ⛢, ☿ 2° 12′ S.
10	22	♃ stationär
15	21	♄ ☌ ☾
16	21	♂ ☌ ♆, ♂ 0° 46′ N.
19	6	♆ stationär
21	11	⛢ ☌ ☾
24	0	☿ ☌ ☾
25	7	♀ ☌ ☾
27	14	♄ stationär
28	19	☿ obere ☌ ☉
30	6	☿ im Perihel
Juni 1	7	♆ ☌ ☾
1	18	♂ ☌ ☾
1	20	♃ ☌ ☾
4	22	♂ ☌ ♃, ♂ 0° 16′ S.
8	16	☿ ☌ ♀, ☿ 1° 6′ N.
12	5	♄ ☌ ☾
17	19	⛢ ☌ ☾
21	21	Sommersanfang
22	12	♀ im Perihel
24	14	♀ ☌ ☾
25	6	☿ ☌ ☾
28	14	♆ ☌ ☾
29	8	♃ ☌ ☾
30	2	♂ ☌ ☾

Welt-Zeit 1933	h	
Juli 2	16	☿ gr. östl. El. 25° 53′
2	21	☉ in Erdferne
9	12	♄ ☌ ☾
12	13	☿ ☌ ♀, ☿ 3° 52′ S.
13	6	☿ im Aphel
15	3	⛢ ☌ ☾
15	20	☿ stationär
23	12	☿ ☌ ☾
24	22	♀ ☌ ☾
25	21	♆ ☌ ☾
26	22	♃ ☌ ☾
28	13	♂ ☌ ☾
30	11	☿ untere ☌ ☉
Aug. 2	23	⛢ stationär
3	19	♀ ☌ ♆, ♀ 0° 38′ N.
5	20	♄ ☌ ☾
5	23	♄ ☍ ☉
9	7	☿ stationär
11	12	⛢ ☌ ☾
17	11	♀ ☌ ♃, ♀ 0 6′ S.
17	23	☿ gr. westl. El. 18° 37′
19	14	☿ ☌ ☾
21	—	☉ ringf. Finsternis
22	5	♆ ☌ ☾
23	14	♃ ☌ ☾
24	2	♀ ☌ ☾
26	1	♂ ☌ ☾
26	5	☿ im Perihel
Sept. 2	1	♄ ☌ ☾
2	22	♆ ☌ ☉
7	6	☿ ☌ ♆, ☿ 1° 2′ N.
7	20	⛢ ☌ ☾
12	0	☿ obere ☌ ☉
18	15	♆ ☌ ☾
19	7	☿ ☌ ♃, ☿ 0° 3′ S.
20	8	♃ ☌ ☾
20	11	☿ ☌ ☾
22	22	♀ ☌ ☾
23	12	Herbstanfang
23	15	♂ ☌ ☾
27	6	♃ ☌ ☉
29	6	♄ ☌ ☾

Welt-Zeit 1933	h	
Okt. 5	2	⛢ ☌ ☾
9	5	☿ im Aphel
12	20	♀ im Aphel
14	12	♀ ☌ ♂, ♀ 1° 15′ S.
14	18	♄ stationär
16	2	♆ ☌ ☾
18	4	♃ ☌ ☾
19	6	⛢ ☍ ☉
20	23	☿ ☌ ☾
22	7	♂ ☌ ☾
22	13	♀ ☌ ☾
26	12	♄ ☌ ☾
28	10	☿ gr. östl. El. 23° 57′
Nov. 1	8	⛢ ☌ ☾
8	14	☿ stationär
12	13	♆ ☌ ☾
15	0	♃ ☌ ☾
17	23	☿ ☌ ☾
19	0	☿ untere ☌ ☉
20	1	♂ ☌ ☾
21	1	♀ ☌ ☾
22	4	☿ im Perihel
22	20	♄ ☌ ☾
25	15	♀ gr. östl. El. 47° 17′
28	5	☿ stationär
28	12	⛢ ☌ ☾
Dez. 6	11	☿ gr. westl. El. 20° 41′
9	22	♆ ☌ ☾
12	19	♃ ☌ ☾
15	13	♆ stationär
15	22	☿ ☌ ☾
18	23	♂ ☌ ☾
20	7	♀ ☌ ☾
20	8	♄ ☌ ☾
21	10	♀ ☌ ♄, ♀ 0° 20′ S.
22	7	Wintersanfang
25	17	⛢ ☌ ☾
31	11	♀ im größten Glanze

Präzession in Rektaszension (p_α) und Deklination (p_δ)

α \ δ	p_α +60°	+50°	+40°	+30°	+20°	+10°	0°	−10°	−20°	−30°	−40°	−50°	−60°	p_δ
h	s	s	s	s	s	s	s	s	s	s	s	s	s	"
0	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	+20.0
1	3.67	3.48	3.36	3.27	3.20	3.13	3.07	3.01	2.95	2.87	2.78	2.66	2.47	+19.4
2	4.23	3.87	3.63	3.46	3.32	3.19	3.07	2.95	2.83	2.69	2.51	2.28	1.92	+17.4
3	4.71	4.20	3.87	3.62	3.42	3.24	3.07	2.91	2.73	2.53	2.28	1.95	1.44	+14.2
4	5.08	4.45	4.04	3.74	3.49	3.28	3.07	2.87	2.65	2.41	2.10	1.69	1.07	+10.0
5	5.31	4.61	4.16	3.82	3.54	3.30	3.07	2.84	2.60	2.33	1.99	1.53	0.84	+ 5.2
6	5.39	4.67	4.19	3.84	3.56	3.31	3.07	2.84	2.59	2.30	1.95	1.48	0.76	0.0
7	5.31	4.61	4.16	3.82	3.54	3.30	3.07	2.84	2.60	2.33	1.99	1.53	0.84	− 5.2
8	5.08	4.45	4.04	3.74	3.49	3.28	3.07	2.87	2.65	2.41	2.10	1.69	1.07	−10.0
9	4.71	4.20	3.87	3.62	3.42	3.24	3.07	2.91	2.73	2.53	2.28	1.95	1.44	−14.2
10	4.23	3.87	3.63	3.46	3.32	3.19	3.07	2.95	2.83	2.69	2.51	2.28	1.92	−17.4
11	3.67	3.48	3.36	3.27	3.20	3.13	3.07	3.01	2.95	2.87	2.78	2.66	2.47	−19.4
12	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	−20.0
13	2.47	2.66	2.78	2.87	2.95	3.01	3.07	3.13	3.20	3.27	3.36	3.48	3.67	−19.4
14	1.92	2.28	2.51	2.69	2.83	2.95	3.07	3.19	3.32	3.46	3.63	3.87	4.23	−17.4
15	1.44	1.95	2.28	2.53	2.73	2.91	3.07	3.24	3.42	3.62	3.87	4.20	4.71	−14.2
16	1.07	1.69	2.10	2.41	2.65	2.87	3.07	3.28	3.49	3.74	4.04	4.45	5.08	−10.0
17	0.84	1.53	1.99	2.33	2.60	2.84	3.07	3.30	3.54	3.82	4.16	4.61	5.31	− 5.2
18	0.76	1.48	1.95	2.30	2.59	2.84	3.07	3.31	3.56	3.84	4.19	4.67	5.39	0.0
19	0.84	1.53	1.99	2.33	2.60	2.84	3.07	3.30	3.54	3.82	4.16	4.61	5.31	+ 5.2
20	1.07	1.69	2.10	2.41	2.65	2.87	3.07	3.28	3.49	3.74	4.04	4.45	5.08	+10.0
21	1.44	1.95	2.28	2.53	2.73	2.91	3.07	3.24	3.42	3.62	3.87	4.20	4.71	+14.2
22	1.92	2.28	2.51	2.69	2.83	2.95	3.07	3.19	3.32	3.46	3.63	3.87	4.23	+17.4
23	2.47	2.66	2.78	2.87	2.95	3.01	3.07	3.13	3.20	3.27	3.36	3.48	3.67	+19.4
24	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	+20.0

Präzessionswerte und Schiefe der Ekliptik

Zeit	m	n	ψ	$\log \pi$	Π	ε
	s	"	"		° ′	° ′ "
1900.0	3.07233	20.0468	50.2564	9.67309	173 57.06	23 27 8.26
1905.0	3.07243	20.0464	50.2575	9.67305	173 59.80	23 27 5.92
1910.0	3.07252	20.0460	50.2586	9.67302	174 2.53	23 27 3.58
1915.0	3.07261	20.0456	50.2597	9.67299	174 5.27	23 27 1.23
1920.0	3.07271	20.0451	50.2608	9.67296	174 8.01	23 26 58.89
1925.0	3.07280	20.0447	50.2620	9.67293	174 10.75	23 26 56.55
1930.0	3.07289	20.0443	50.2631	9.67290	174 13.49	23 26 54.21
1935.0	3.07299	20.0438	50.2642	9.67287	174 16.23	23 26 51.87
1940.0	3.07308	20.0434	50.2653	9.67284	174 18.97	23 26 49.52
1945.0	3.07317	20.0430	50.2664	9.67281	174 21.71	23 26 47.18
1950.0	3.07327	20.0426	50.2675	9.67278	174 24.45	23 26 44.84

Länge λ	Präzession in Länge p_λ — Breite β 0°	+1°	+2°	+3°	+4°	+5°	+6°	+7°	+8°	+9°	Länge λ	Präz. in Br. p_β — Präzession p_β	
	″	″	″	″	″	″	″	″	″	″		″	
0	50.262	.254	.245	.237	.229	50.221	.213	.205	.196	.188	0	+0.048	80
10	.262	.254	.246	.238	.230	.222	.214	.206	.198	.190	10	+0.128	77
20	.262	.255	.247	.240	.232	.225	.217	.210	.202	.195	20	+0.205	70
30	.262	.255	.249	.242	.235	.229	.222	.215	.208	.202	30	+0.275	63
40	50 262	.256	.251	.245	.239	50.233	.227	.221	.216	.210	40	+0.338	52
50	.262	.257	.253	.248	.243	.239	.234	.229	.225	.220	50	+0.390	40
60	.262	.259	.255	.252	.249	.245	.242	.238	.235	.231	60	+0.430	26
70	.262	.260	.258	.256	.254	.252	.250	.248	.246	.244	70	+0.456	14
80	50.262	.261	.261	.260	.259	50.259	.258	.258	.257	.257	80	+0.470	1
90	.262	.263	.263	.264	.265	.266	.267	.268	.269	.270	90	+0.469	16
100	.262	.264	.267	.269	.271	.273	.275	.277	.280	.282	100	+0.453	29
110	.262	.266	.269	.273	.277	.280	.284	.287	.291	.294	110	+0.424	42
120	50.262	.267	.271	.276	.281	50.286	.291	.296	.301	.306	120	+0.382	54
130	.262	.268	.274	.280	.286	.292	.298	.304	.310	.316	130	+0.328	63
140	.262	.269	.275	.282	.289	.296	.303	.310	.317	.324	140	+0.265	72
150	.262	.270	.277	.285	.292	.300	.307	.315	.322	.330	150	+0.193	77
160	50.262	.270	.278	.286	.294	50.302	.310	.318	.326	.334	160	+0.116	81
170	.262	.270	.279	.287	.295	.303	.311	.319	.328	.336	170	+0.035	83
180	.262	.270	.279	.287	.295	.303	.311	.319	.328	.336	180	−0.048	80
190	.262	.270	.278	.286	.294	.302	.310	.318	.326	.334	190	−0.128	77
200	50.262	.269	.277	.284	.292	50.299	.307	.314	.322	.329	200	−0.205	70
210	.262	.269	.275	.282	.289	.295	.302	.309	.316	.322	210	−0.275	63
220	.262	.268	.273	.279	.285	.291	.297	.303	.308	.314	220	−0.338	52
230	.262	.267	.271	.276	.281	.285	.290	.295	.299	.304	230	−0.390	40
240	50.262	.265	.269	.272	.275	50.279	.282	.286	.289	.293	240	−0.430	26
250	.262	.264	.266	.268	.270	.272	.274	.276	.278	.280	250	−0.456	14
260	.262	.263	.263	.264	.265	.265	.266	.266	.267	.267	260	−0.470	1
270	.262	.261	.261	.260	.259	.258	.257	.256	.255	.254	270	−0.469	16
280	50.262	.260	.257	.255	.253	50.251	.249	.247	.244	.242	280	−0.453	29
290	.262	.258	.255	.251	.247	.244	.240	.237	.233	.230	290	−0.424	42
300	.262	.257	.253	.248	.243	.238	.233	.228	.223	.218	300	−0.382	54
310	.262	.256	.250	.244	.238	.232	.226	.220	.214	.208	310	−0.328	63
320	50.262	.255	.249	.242	.235	50.228	.221	.214	.207	.200	320	−0.265	72
330	.262	.254	.247	.239	.232	.224	.217	.209	.202	.194	330	−0.193	77
340	.262	.254	.246	.238	.230	.222	.214	.206	.198	.190	340	−0.116	81
350	.262	.254	.245	.237	.229	.221	.213	.205	.196	.188	350	−0.035	83
360	50.262	.254	.245	.237	.229	50.221	.213	.205	.196	.188	360	+0.048	

Länge λ	Präzession in Länge p_λ — Breite β: 0°	−1°	−2°	−3°	−4°	−5°	−6°	−7°	−8°	−9°	Länge λ	Präz. in Br. p_β — Präzession p_β	
°	″	″	″	″	″	″	″	″	″	″	°	″	
0	50.262	.270	.279	.287	.295	50.303	.311	.319	.328	.336	0	+0.048	80
10	.262	.270	.278	.286	.294	.302	.310	.318	.326	.334	10	+0.128	77
20	.262	.269	.277	.284	.292	.299	.307	.314	.322	.329	20	+0.205	70
30	.262	.269	.275	.282	.289	.295	.302	.309	.316	.322	30	+0.275	63
40	50.262	.268	.273	.279	.285	50.291	.297	.303	.308	.314	40	+0.338	52
50	.262	.267	.271	.276	.281	.285	.290	.295	.299	.304	50	+0.390	40
60	.262	.265	.269	.272	.275	.279	.282	.286	.289	.293	60	+0.430	26
70	.262	.264	.266	.268	.270	.272	.274	.276	.278	.280	70	+0.456	14
80	50.262	.263	.263	.264	.265	50.265	.266	.266	.267	.267	80	+0.470	1
90	.262	.261	.261	.260	.259	.258	.257	.256	.255	.254	90	+0.469	16
100	.262	.260	.257	.255	.253	.251	.249	.247	.244	.242	100	+0.453	29
110	.262	.258	.255	.251	.247	.244	.240	.237	.233	.230	110	+0.424	42
120	50.262	.257	.253	.248	.243	50.238	.233	.228	.223	.218	120	+0.382	54
130	.262	.256	.250	.244	.238	.232	.226	.220	.214	.208	130	+0.328	63
140	.262	.255	.249	.242	.235	.228	.221	.214	.207	.200	140	+0.265	72
150	.262	.254	.247	.239	.232	.224	.217	.209	.202	.194	150	+0.193	77
160	50.262	.254	.246	.238	.230	50.222	.214	.206	.198	.190	160	+0.116	81
170	.262	.254	.245	.237	.229	.221	.213	.205	.196	.188	170	+0.035	83
180	.262	.254	.245	.237	.229	.221	.213	.205	.196	.188	180	−0.048	80
190	.262	.254	.246	.238	.230	.222	.214	.206	.198	.190	190	−0.128	77
200	50.262	.255	.247	.240	.232	50.225	.217	.210	.202	.195	200	−0.205	70
210	.262	.255	.249	.242	.235	.229	.222	.215	.208	.202	210	−0.275	63
220	.262	.256	.251	.245	.239	.233	.227	.221	.216	.210	220	−0.338	52
230	.262	.257	.253	.248	.243	.239	.234	.229	.225	.220	230	−0.390	40
240	50.262	.259	.255	.252	.249	50.245	.242	.238	.235	.231	240	−0.430	26
250	.262	.260	.258	.256	.254	.252	.250	.248	.246	.244	250	−0.456	14
260	.262	.261	.261	.260	.259	.259	.258	.258	.257	.257	260	−0.470	1
270	.262	.263	.263	.264	.265	.266	.267	.268	.269	.270	270	−0.469	16
280	50.262	.264	.267	.269	.271	50.273	.275	.277	.280	.282	280	−0.453	29
290	.262	.266	.269	.273	.277	.280	.284	.287	.291	.294	290	−0.424	42
300	.262	.267	.271	.276	.281	.286	.291	.296	.301	.306	300	−0.382	54
310	.262	.268	.274	.280	.286	.292	.298	.304	.310	.316	310	−0.328	63
320	50.262	.269	.275	.282	.289	50.296	.303	.310	.317	.324	320	−0.265	72
330	.262	.270	.277	.285	.292	.300	.307	.315	.322	.330	330	−0.193	77
340	.262	.270	.278	.286	.294	.302	.310	.318	.326	.334	340	−0.116	81
350	.262	.270	.279	.287	.295	.303	.311	.319	.328	.336	350	−0.035	83
360	50.262	.270	.279	.287	.295	50.303	.311	.319	.328	.336	360	+0.048	

Verwandlung von mittlerer Zeit in Sternzeit

Red.	0^m	1^m	2^m	3^m	Red.		Red.	
s	h m s	h m s	h m s	h m s	s	m s	s	m s
0	0 0 0	6 5 15	12 10 29	18 15 44	0.00	0 0	0.50	3 3
1	0 6 5	6 11 20	12 16 34	18 21 49	0.01	0 4	0.51	3 6
2	0 12 10	6 17 25	12 22 40	18 27 54	0.02	0 7	0.52	3 10
3	0 18 16	6 23 30	12 28 45	18 33 59	0.03	0 11	0.53	3 14
4	0 24 21	6 29 36	12 34 50	18 40 5	0.04	0 15	0.54	3 17
5	0 30 26	6 35 41	12 40 55	18 46 10	0.05	0 18	0.55	3 21
6	0 36 31	6 41 46	12 47 1	18 52 15	0.06	0 22	0.56	3 25
7	0 42 37	6 47 51	12 53 6	18 58 20	0.07	0 26	0.57	3 28
8	0 48 42	6 53 56	12 59 11	19 4 26	0.08	0 29	0.58	3 32
9	0 54 47	7 0 2	13 5 16	19 10 31	0.09	0 33	0.59	3 35
10	1 0 52	7 6 7	13 11 21	19 16 36	0.10	0 37	0.60	3 39
11	1 6 58	7 12 12	13 17 27	19 22 41	0.11	0 40	0.61	3 43
12	1 13 3	7 18 17	13 23 32	19 28 47	0.12	0 44	0.62	3 46
13	1 19 8	7 24 23	13 29 37	19 34 52	0.13	0 47	0.63	3 50
14	1 25 13	7 30 28	13 35 42	19 40 57	0.14	0 51	0.64	3 54
15	1 31 19	7 36 33	13 41 48	19 47 2	0.15	0 55	0.65	3 57
16	1 37 24	7 42 38	13 47 53	19 53 7	0.16	0 58	0.66	4 1
17	1 43 29	7 48 44	13 53 58	19 59 13	0.17	1 2	0.67	4 5
18	1 49 34	7 54 49	14 0 3	20 5 18	0.18	1 6	0.68	4 8
19	1 55 40	8 0 54	14 6 9	20 11 23	0.19	1 9	0.69	4 12
20	2 1 45	8 6 59	14 12 14	20 17 28	0.20	1 13	0.70	4 16
21	2 7 50	8 13 5	14 18 19	20 23 34	0.21	1 17	0.71	4 19
22	2 13 55	8 19 10	14 24 24	20 29 39	0.22	1 20	0.72	4 23
23	2 20 1	8 25 15	14 30 30	20 35 44	0.23	1 24	0.73	4 27
24	2 26 6	8 31 20	14 36 35	20 41 49	0.24	1 28	0.74	4 30
25	2 32 11	8 37 26	14 42 40	20 47 55	0.25	1 31	0.75	4 34
26	2 38 16	8 43 31	14 48 45	20 54 0	0.26	1 35	0.76	4 38
27	2 44 22	8 49 36	14 54 51	21 0 5	0.27	1 39	0.77	4 41
28	2 50 27	8 55 41	15 0 56	21 6 10	0.28	1 42	0.78	4 45
29	2 56 32	9 1 47	15 7 1	21 12 16	0.29	1 46	0.79	4 49
30	3 2 37	9 7 52	15 13 6	21 18 21	0.30	1 50	0.80	4 52
31	3 8 43	9 13 57	15 19 12	21 24 26	0.31	1 53	0.81	4 56
32	3 14 48	9 20 2	15 25 17	21 30 31	0.32	1 57	0.82	4 59
33	3 20 53	9 26 8	15 31 22	21 36 37	0.33	2 1	0.83	5 3
34	3 26 58	9 32 13	15 37 27	21 42 42	0.34	2 4	0.84	5 7
35	3 33 3	9 38 18	15 43 33	21 48 47	0.35	2 8	0.85	5 10
36	3 39 9	9 44 23	15 49 38	21 54 52	0.36	2 11	0.86	5 14
37	3 45 14	9 50 28	15 55 43	22 0 58	0.37	2 15	0.87	5 18
38	3 51 19	9 56 34	16 1 48	22 7 3	0.38	2 19	0.88	5 21
39	3 57 24	10 2 39	16 7 54	22 13 8	0.39	2 22	0.89	5 25
40	4 3 30	10 8 44	16 13 59	22 19 13	0.40	2 26	0.90	5 29
41	4 9 35	10 14 49	16 20 4	22 25 19	0.41	2 30	0.91	5 32
42	4 15 40	10 20 55	16 26 9	22 31 24	0.42	2 33	0.92	5 36
43	4 21 45	10 27 0	16 32 14	22 37 29	0.43	2 37	0.93	5 40
44	4 27 51	10 33 5	16 38 20	22 43 34	0.44	2 41	0.94	5 43
45	4 33 56	10 39 10	16 44 25	22 49 39	0.45	2 44	0.95	5 47
46	4 40 1	10 45 16	16 50 30	22 55 45	0.46	2 48	0.96	5 51
47	4 46 6	10 51 21	16 56 35	23 1 50	0.47	2 52	0.97	5 54
48	4 52 12	10 57 26	17 2 41	23 7 55	0.48	2 55	0.98	5 58
49	4 58 17	11 3 31	17 8 46	23 14 0	0.49	2 59	0.99	6 2
50	5 4 22	11 9 37	17 14 51	23 20 6	0.50	3 3	1.00	6 5
51	5 10 27	11 15 42	17 20 56	23 26 11				
52	5 16 33	11 21 47	17 27 2	23 32 16				
53	5 22 38	11 27 52	17 33 7	23 38 21				
54	5 28 43	11 33 58	17 39 12	23 44 27				
55	5 34 48	11 40 3	17 45 17	23 50 32				
56	5 40 54	11 46 8	17 51 23	23 56 37				
57	5 46 59	11 52 13	17 57 28	24 2 42				
58	5 53 4	11 58 19	18 3 33	24 8 48				
59	5 59 9	12 4 24	18 9 38	24 14 53				

Die Reduktion ist zur mittleren Zeit zu addieren.

Red.	0^m	1^m	2^m	3^m	Red.		Red.	
s	h m s	h m s	h m s	h m s	s	m s	s	m s
0	0 0 0	6 6 15	12 12 29	18 18 44	0.00	0 0	0.50	3 3
1	0 6 6	6 12 21	12 18 35	18 24 50	0.01	0 4	0.51	3 7
2	0 12 12	6 18 27	12 24 42	18 30 56	0.02	0 7	0.52	3 10
3	0 18 19	6 24 33	12 30 48	18 37 2	0.03	0 11	0.53	3 14
4	0 24 25	6 30 40	12 36 54	18 43 9	0.04	0 15	0.54	3 18
5	0 30 31	6 36 46	12 43 0	18 49 15	0.05	0 18	0.55	3 21
6	0 36 37	6 42 52	12 49 7	18 55 21	0.06	0 22	0.56	3 25
7	0 42 44	6 48 58	12 55 13	19 1 27	0.07	0 26	0.57	3 29
8	0 48 50	6 55 4	13 1 19	19 7 34	0.08	0 29	0.58	3 32
9	0 54 56	7 1 11	13 7 25	19 13 40	0.09	0 33	0.59	3 36
10	1 1 2	7 7 17	13 13 31	19 19 46	0.10	0 37	0.60	3 40
11	1 7 9	7 13 23	13 19 38	19 25 52	0.11	0 40	0.61	3 43
12	1 13 15	7 19 29	13 25 44	19 31 59	0.12	0 44	0.62	3 47
13	1 19 21	7 25 36	13 31 50	19 38 5	0.13	0 48	0.63	3 51
14	1 25 27	7 31 42	13 37 56	19 44 11	0.14	0 51	0.64	3 54
15	1 31 34	7 37 48	13 44 3	19 50 17	0.15	0 55	0.65	3 58
16	1 37 40	7 43 54	13 50 9	19 56 23	0.16	0 59	0.66	4 2
17	1 43 46	7 50 1	13 56 15	20 2 30	0.17	1 2	0.67	4 5
18	1 49 52	7 56 7	14 2 21	20 8 36	0.18	1 6	0.68	4 9
19	1 55 59	8 2 13	14 8 28	20 14 42	0.19	1 10	0.69	4 13
20	2 2 5	8 8 19	14 14 34	20 20 48	0.20	1 13	0.70	4 16
21	2 8 11	8 14 26	14 20 40	20 26 55	0.21	1 17	0.71	4 20
22	2 14 17	8 20 32	14 26 46	20 33 1	0.22	1 21	0.72	4 24
23	2 20 24	8 26 38	14 32 53	20 39 7	0.23	1 24	0.73	4 27
24	2 26 30	8 32 44	14 38 59	20 45 13	0.24	1 28	0.74	4 31
25	2 32 36	8 38 51	14 45 5	20 51 20	0.25	1 32	0.75	4 35
26	2 38 42	8 44 57	14 51 11	20 57 26	0.26	1 35	0.76	4 38
27	2 44 49	8 51 3	14 57 18	21 3 32	0.27	1 39	0.77	4 42
28	2 50 55	8 57 9	15 3 24	21 9 38	0.28	1 43	0.78	4 46
29	2 57 1	9 3 16	15 9 30	21 15 45	0.29	1 46	0.79	4 49
30	3 3 7	9 9 22	15 15 36	21 21 51	0.30	1 50	0.80	4 53
31	3 9 14	9 15 28	15 21 43	21 27 57	0.31	1 54	0.81	4 57
32	3 15 20	9 21 34	15 27 49	21 34 3	0.32	1 57	0.82	5 0
33	3 21 26	9 27 41	15 33 55	21 40 10	0.33	2 1	0.83	5 4
34	3 27 32	9 33 47	15 40 1	21 46 16	0.34	2 5	0.84	5 8
35	3 33 38	9 39 53	15 46 8	21 52 22	0.35	2 8	0.85	5 11
36	3 39 45	9 45 59	15 52 14	21 58 28	0.36	2 12	0.86	5 15
37	3 45 51	9 52 5	15 58 20	22 4 35	0.37	2 16	0.87	5 19
38	3 51 57	9 58 12	16 4 26	22 10 41	0.38	2 19	0.88	5 22
39	3 58 3	10 4 18	16 10 33	22 16 47	0.39	2 23	0.89	5 26
40	4 4 10	10 10 24	16 16 39	22 22 53	0.40	2 26	0.90	5 30
41	4 10 16	10 16 30	16 22 45	22 29 0	0.41	2 30	0.91	5 33
42	4 16 22	10 22 37	16 28 51	22 35 6	0.42	2 34	0.92	5 37
43	4 22 28	10 28 43	16 34 57	22 41 12	0.43	2 37	0.93	5 41
44	4 28 35	10 34 49	16 41 4	22 47 18	0.44	2 41	0.94	5 44
45	4 34 41	10 40 55	16 47 10	22 53 24	0.45	2 45	0.95	5 48
46	4 40 47	10 47 2	16 53 16	22 59 31	0.46	2 48	0.96	5 52
47	4 46 53	10 53 8	16 59 22	23 5 37	0.47	2 52	0.97	5 55
48	4 53 0	10 59 14	17 5 29	23 11 43	0.48	2 56	0.98	5 59
49	4 59 6	11 5 20	17 11 35	23 17 49	0.49	2 59	0.99	6 3
50	5 5 12	11 11 27	17 17 41	23 23 56	0.50	3 3	1.00	6 6
51	5 11 18	11 17 33	17 23 47	23 30 2				
52	5 17 25	11 23 39	17 29 54	23 36 8				
53	5 23 31	11 29 45	17 36 0	23 42 14				
54	5 29 37	11 35 52	17 42 6	23 48 21				
55	5 35 43	11 41 58	17 48 12	23 54 27				
56	5 41 50	11 48 4	17 54 19	24 0 33				
57	5 47 56	11 54 10	18 0 25	24 6 39				
58	5 54 2	12 0 17	18 6 31	24 12 46				
59	6 0 8	12 6 23	18 12 37	24 18 52				

Die Reduktion ist von der Sternzeit zu subtrahieren.

Verwandlung von mittlerer Zeit in Sternzeit

Red.	0m	1m	2m	3m	Red.
s	h m s	h m s	h m s	h m s	s
0	0 0 0.0	6 5 14.5	12 10 29.1	18 15 43.6	0
1	6 5.2	11 19.8	16 34.3	21 48.8	1
2	12 10.5	17 25.0	22 39.6	27 54.1	2
3	18 15.7	23 30.3	28 44.8	33 59.3	3
4	24 21.0	29 35.5	34 50.0	40 4.6	4
5	30 26.2	35 40.7	40 55.3	46 9.8	5
6	36 31.5	41 46.0	47 0.5	52 15.1	6
7	42 36.7	47 51.2	53 5.8	18 58 20.3	7
8	48 41.9	6 53 56.5	12 59 11.0	19 4 25.5	8
9	0 54 47.2	7 0 1.7	13 5 16.2	10 30.8	9
10	1 0 52.4	6 7.0	11 21.5	16 36.0	10
11	6 57.7	12 12.2	17 26.7	22 41.3	11
12	13 2.9	18 17.4	23 32.0	28 46.5	12
13	19 8.1	24 22.7	29 37.2	34 51.8	13
14	25 13.4	30 27.9	35 42.5	40 57.0	14
15	31 18.6	36 33.2	41 47.7	47 2.2	15
16	37 23.9	42 38.4	47 52.9	53 7.5	16
17	43 29.1	48 43.7	13 53 58.2	19 59 12.7	17
18	49 34.4	7 54 48.9	14 0 3.4	20 5 18.0	18
19	1 55 39.6	8 0 54.1	6 8.7	11 23.2	19
20	2 1 44.8	6 59.4	12 13.9	17 28.4	20
21	7 50.1	13 4.6	18 19.2	23 33.7	21
22	13 55.3	19 9.9	24 24.4	29 38.9	22
23	20 0.6	25 15.1	30 29.6	35 44.2	23
24	26 5.8	31 20.3	36 34.9	41 49.4	24
25	32 11.1	37 25.6	42 40.1	47 54.7	25
26	38 16.3	43 30.8	48 45.4	20 53 59.9	26
27	44 21.5	49 36.1	14 54 50.6	21 0 5.1	27
28	50 26.8	8 55 41.3	15 0 55.9	6 10.4	28
29	2 56 32.0	9 1 46.6	7 1.1	12 15.6	29
30	3 2 37.3	7 51.8	13 6.3	18 20.9	30
31	8 42.5	13 57.0	19 11.6	24 26.1	31
32	14 47.8	20 2.3	25 16.8	30 31.4	32
33	20 53.0	26 7.5	31 22.1	36 36.6	33
34	26 58.2	32 12.8	37 27.3	42 41.8	34
35	33 3.5	38 18.0	43 32.5	48 47.1	35
36	39 8.7	44 23.3	49 37.8	21 54 52.3	36
37	45 14.0	50 28.5	15 55 43.0	22 0 57.6	37
38	51 19.2	9 56 33.7	16 1 48.3	7 2.8	38
39	3 57 24.4	10 2 39.0	7 53.5	13 8.0	39
40	4 3 29.7	8 44.2	13 58.8	19 13.3	40
41	9 34.9	14 49.5	20 4.0	25 18.5	41
42	15 40.2	20 54.7	26 9.2	31 23.8	42
43	21 45.4	27 0.0	32 14.5	37 29.0	43
44	27 50.7	33 5.2	38 19.7	43 34.3	44
45	33 55.9	39 10.4	44 25.0	49 39.5	45
46	40 1.1	45 15.7	50 30.2	22 55 44.7	46
47	46 6.4	51 20.9	16 56 35.5	23 1 50.0	47
48	52 11.6	10 57 26.2	17 2 40.7	7 55.2	48
49	4 58 16.9	11 3 31.4	8 45.9	14 0.5	49
50	5 4 22.1	9 36.6	14 51.2	20 5.7	50
51	10 27.4	15 41.9	20 56.4	26 11.0	51
52	16 32.6	21 47.1	27 1.7	32 16.2	52
53	22 37.8	27 52.4	33 6.9	38 21.4	53
54	28 43.1	33 57.6	39 12.1	44 26.7	54
55	34 48.3	40 2.9	45 17.4	50 31.9	55
56	40 53.6	46 8.1	51 22.6	23 56 37.2	56
57	46 58.8	52 13.3	17 57 27.9	24 2 42.4	57
58	53 4.0	11 58 18.6	18 3 33.1	8 47.7	58
59	5 59 9.3	12 4 23.8	18 9 38.4	24 14 52.9	59

Die Reduktion ist zur mittleren Zeit zu addieren.

Red.		Red.	
s	m s	s	m s
0.00	0 0.0	0.50	3 2.6
01	3.7	51	6.3
02	7.3	52	9.9
03	11.0	53	13.6
04	14.6	54	17.2
0.05	18.3	0.55	20.9
06	21.9	56	24.5
07	25.6	57	28.2
08	29.2	58	31.8
09	32.9	59	35.5
0.10	36.5	0.60	39.1
11	40.2	61	42.8
12	43.8	62	46.5
13	47.5	63	50.1
14	51.1	64	53.8
0.15	54.8	0.65	3 57.4
16	0 58.4	66	4 1.1
17	1 2.1	67	4.7
18	5.7	68	8.4
19	9.4	69	12.0
0.20	13.0	0.70	15.7
21	16.7	71	19.3
22	20.4	72	23.0
23	24.0	73	26.6
24	27.7	74	30.3
0.25	31.3	0.75	33.9
26	35.0	76	37.6
27	38.6	77	41.2
28	42.3	78	44.9
29	45.9	79	48.5
0.30	49.6	0.80	52.2
31	53.2	81	55.8
32	1 56.9	82	4 59.5
33	2 0.5	83	5 3.2
34	4.2	84	6.8
0.35	7.8	0.85	10.5
36	11.5	86	14.1
37	15.1	87	17.8
38	18.8	88	21.4
39	22.4	89	25.1
0.40	26.1	0.90	28.7
41	29.7	91	32.4
42	33.4	92	36.0
43	37.1	93	39.7
44	40.7	94	43.3
0.45	44.4	0.95	47.0
46	48.0	96	50.6
47	51.7	97	54.3
48	55.3	98	5 57.9
0.49	2 59.0	0.99	6 1.6

Red.		Red.		Red.	
s	s	s	s	s	s
0.000		0.003		0.006	
	0.2		1.3		2.4
001		004		007	
	0.5		1.6		2.7
002		005		008	
	0.9		2.0		3.1
003		006		009	
	1.3		2.4		3.5
0.004		0.007		0.010	
					3.8

Red.	0^m	1^m	2^m	3^m	Red.
s	h m s	h m s	h m s	h m s	s
0	0 0 0.0	6 6 14.5	12 12 29.1	18 18 43.6	0
1	6 6.2	12 20.8	18 35.3	24 49.9	1
2	12 12.5	18 27.0	24 41.6	30 56.1	2
3	18 18.7	24 33.3	30 47.8	37 2.3	3
4	24 25.0	30 39.5	36 54.0	43 8.6	4
5	30 31.2	36 45.7	43 0.3	49 14.8	5
6	36 37.5	42 52.0	49 6.5	18 55 21.1	6
7	42 43.7	48 58.2	12 55 12.8	19 1 27.3	7
8	48 49.9	6 55 4.5	13 1 19.0	7 33.5	8
9	0 54 56.2	7 1 10.7	7 25.3	13 39.8	9
10	1 1 2.4	7 17.0	13 31.5	19 46.0	10
11	7 8.7	13 23.2	19 37.7	25 52.3	11
12	13 14.9	19 29.4	25 44.0	31 58.5	12
13	19 21.1	25 35.7	31 50.2	38 4.8	13
14	25 27.4	31 41.9	37 56.5	44 11.0	14
15	31 33.6	37 48.2	44 2.7	50 17.2	15
16	37 39.9	43 54.4	50 8.9	19 56 23.5	16
17	43 46.1	50 0.7	13 56 15.2	20 2 29.7	17
18	49 52.4	7 56 6.9	14 2 21.4	8 36.0	18
19	1 55 58.6	8 2 13.1	8 27.7	14 42.2	19
20	2 2 4.8	8 19.4	14 33.9	20 48.5	20
21	8 11.1	14 25.6	20 40.2	26 54.7	21
22	14 17.3	20 31.9	26 46.4	33 0.9	22
23	20 23.6	26 38.1	32 52.6	39 7.2	23
24	26 29.8	32 44.4	38 58.9	45 13.4	24
25	32 36.1	38 50.6	45 5.1	51 19.7	25
26	38 42.3	44 56.8	51 11.4	20 57 25.9	26
27	44 48.5	51 3.1	14 57 17.6	21 3 32.2	27
28	50 54.8	8 57 9.3	15 3 23.9	9 38.4	28
29	2 57 1.0	9 3 15.6	9 30.1	15 44.6	29
30	3 3 7.3	9 21.8	15 36.3	21 50.9	30
31	9 13.5	15 28.0	21 42.6	27 57.1	31
32	15 19.8	21 34.3	27 48.8	34 3.4	32
33	21 26.0	27 40.5	33 55.1	40 9.6	33
34	27 32.2	33 46.8	40 1.3	46 15.8	34
35	33 38.5	39 53.0	46 7.6	52 22.1	35
36	39 44.7	45 59.3	52 13.8	21 58 28.3	36
37	45 51.0	52 5.5	15 58 20.0	22 4 34.6	37
38	51 57.2	9 58 11.7	16 4 26.3	10 40.8	38
39	3 58 3.4	10 4 18.0	10 32.5	16 47.1	39
40	4 4 9.7	10 24.2	16 38.8	22 53.3	40
41	10 15.9	16 30.5	22 45.0	28 59.5	41
42	16 22.2	22 36.7	28 51.2	35 5.8	42
43	22 28.4	28 43.0	34 57.5	41 12.0	43
44	28 34.7	34 49.2	41 3.7	47 18.3	44
45	34 40.9	40 55.4	47 10.0	53 24.5	45
46	40 47.1	47 1.7	53 16.2	22 59 30.8	46
47	46 53.4	53 7.9	16 59 22.5	23 5 37.0	47
48	52 59.6	10 59 14.2	17 5 28.7	11 43.2	48
49	4 59 5.9	11 5 20.4	11 34.9	17 49.5	49
50	5 5 12.1	11 26.7	17 41.2	23 55.7	50
51	11 18.4	17 32.9	23 47.4	30 2.0	51
52	17 24.6	23 39.1	29 53.7	36 8.2	52
53	23 30.8	29 45.4	35 59.9	42 14.5	53
54	29 37.1	35 51.6	42 6.2	48 20.7	54
55	35 43.3	41 57.9	48 12.4	23 54 26.9	55
56	41 49.6	48 4.1	17 54 18.6	24 0 33.2	56
57	47 55.8	11 54 10.3	18 0 24.9	6 39.4	57
58	5 54 2.1	12 0 16.6	6 31.1	12 45.7	58
59	6 0 8.3	12 6 22.8	18 12 37.4	24 18 51.9	59

Die Reduktion ist von der Sternzeit zu subtrahieren.

Red.		Red.	
s	m s	s	m s
0.00	0 0.0	0.50	3 3.1
01	3.7	51	6.8
02	7.3	52	10.4
03	11.0	53	14.1
04	14.6	54	17.8
0.05	18.3	0.55	21.4
06	22.0	56	25.1
07	25.6	57	28.8
08	29.3	58	32.4
09	33.0	59	36.1
0.10	36.6	0.60	39.7
11	40.3	61	43.4
12	43.9	62	47.1
13	47.6	63	50.7
14	51.3	64	54.4
0.15	54.9	0.65	3 58.1
16	0 58.6	66	4 1.7
17	1 2.3	67	5.4
18	5.9	68	9.0
19	9.6	69	12.7
0.20	13.2	0.70	16.4
21	16.9	71	20.0
22	20.6	72	23.7
23	24.2	73	27.4
24	27.9	74	31.0
0.25	31.6	0.75	34.7
26	35.2	76	38.3
27	38.9	77	42.0
28	42.5	78	45.7
29	46.2	79	49.3
0.30	49.9	0.80	53.0
31	53.5	81	4 56.7
32	1 57.2	82	5 0.3
33	2 0.9	83	4.0
34	4.5	84	7.6
0.35	8.2	0.85	11.3
36	11.8	86	15.0
37	15.5	87	18.6
38	19.2	88	22.3
39	22.8	89	26.0
0.40	26.5	0.90	29.6
41	30.2	91	33.3
42	33.8	92	36.9
43	37.5	93	40.6
44	41.1	94	44.3
0.45	44.8	0.95	47.9
46	48.5	96	51.6
47	52.1	97	55.3
48	55.8	98	5 58.9
0.49	2 59.5	0.99	6 2.6

Red.		Red.		Red.	
s	s	s	s	s	s
0.000		0.003		0.006	
	0.2		1.3		2.4
001		004		007	
	0.5		1.6		2.7
002		005		008	
	0.9		2.0		3.1
003		006		009	
	1.3		2.4		3.5
0.004		0.007		0.010	
					3.8

m	0^h	1^h	2^h	3^h	4^h	5^h	s	
	d	d	d	d	d	d		d
0	0.000000	0.041667	0.083333	0.125000	0.166667	0.208333	0	0.000000
1	000694	042361	084028	125694	167361	209028	1	000012
2	001389	043056	084722	126389	168056	209722	2	000023
3	002083	043750	085417	127083	168750	210417	3	000035
4	002778	044444	086111	127778	169444	211111	4	000046
5	0.003472	0.045139	0.086806	0.128472	0.170139	0.211806	5	0.000058
6	004167	045833	087500	129167	170833	212500	6	000069
7	004861	046528	088194	129861	171528	213194	7	000081
8	005556	047222	088889	130556	172222	213889	8	000093
9	006250	047917	089583	131250	172917	214583	9	000104
10	0.006944	0.048611	0.090278	0.131944	0.173611	0.215278	10	0.000116
11	007639	049306	090972	132639	174306	215972	11	000127
12	008333	050000	091667	133333	175000	216667	12	000139
13	009028	050694	092361	134028	175694	217361	13	000150
14	009722	051389	093056	134722	176389	218056	14	000162
15	0.010417	0.052083	0.093750	0.135417	0.177083	0.218750	15	0.000174
16	011111	052778	094444	136111	177778	219444	16	000185
17	011806	053472	095139	136806	178472	220139	17	000197
18	012500	054167	095833	137500	179167	220833	18	000208
19	013194	054861	096528	138194	179861	221528	19	000220
20	0.013889	0.055556	0.097222	0.138889	0.180556	0.222222	20	0.000231
21	014583	056250	097917	139583	181250	222917	21	000243
22	015278	056944	098611	140278	181944	223611	22	000255
23	015972	057639	099306	140972	182639	224306	23	000266
24	016667	058333	100000	141667	183333	225000	24	000278
25	0.017361	0.059028	0.100694	0.142361	0.184028	0.225694	25	0.000289
26	018056	059722	101389	143056	184722	226389	26	000301
27	018750	060417	102083	143750	185417	227083	27	000313
28	019444	061111	102778	144444	186111	227778	28	000324
29	020139	061806	103472	145139	186806	228472	29	000336
30	0.020833	0.062500	0.104167	0.145833	0.187500	0.229167	30	0.000347
31	021528	063194	104861	146528	188194	229861	31	000359
32	022222	063889	105556	147222	188889	230556	32	000370
33	022917	064583	106250	147917	189583	231250	33	000382
34	023611	065278	106944	148611	190278	231944	34	000394
35	0.024306	0.065972	0.107639	0.149306	0.190972	0.232639	35	0.000405
36	025000	066667	108333	150000	191667	233333	36	000417
37	025694	067361	109028	150694	192361	234028	37	000428
38	026389	068056	109722	151389	193056	234722	38	000440
39	027083	068750	110417	152083	193750	235417	39	000451
40	0.027778	0.069444	0.111111	0.152778	0.194444	0.236111	40	0.000463
41	028472	070139	111806	153472	195139	236806	41	000475
42	029167	070833	112500	154167	195833	237500	42	000486
43	029861	071528	113194	154861	196528	238194	43	000498
44	030556	072222	113889	155556	197222	238889	44	000509
45	0.031250	0.072917	0.114583	0.156250	0.197917	0.239583	45	0.000521
46	031944	073611	115278	156944	198611	240278	46	000532
47	032639	074306	115972	157639	199306	240972	47	000544
48	033333	075000	116667	158333	200000	241667	48	000556
49	034028	075694	117361	159028	200694	242361	49	000567
50	0.034722	0.076389	0.118056	0.159722	0.201389	0.243056	50	0.000579
51	035417	077083	118750	160417	202083	243750	51	000590
52	036111	077778	119444	161111	202778	244444	52	000602
53	036806	078472	120139	161806	203472	245139	53	000613
54	037500	079167	120833	162500	204167	245833	54	000625
55	0.038194	0.079861	0.121528	0.163194	0.204861	0.246528	55	0.000637
56	038889	080556	122222	163889	205556	247222	56	000648
57	039583	081250	122917	164583	206250	247917	57	000660
58	040278	081944	123611	165278	206944	248611	58	000671
59	0.040972	0.082639	0.124306	0.165972	0.207639	0.249306	59	0.000683

m	6^h d	7^h d	8^h d	9^h d	10^h d	11^h d	s	d
0	0.250000	0.291667	0.333333	0.375000	0.416667	0.458333	0	0.000000
1	250694	292361	334028	375694	417361	459028	1	000012
2	251389	293056	334722	376389	418056	459722	2	000023
3	252083	293750	335417	377083	418750	460417	3	000035
4	252778	294444	336111	377778	419444	461111	4	000046
5	0.253472	0.295139	0.336806	0.378472	0.420139	0.461806	5	0.000058
6	254167	295833	337500	379167	420833	462500	6	000069
7	254861	296528	338194	379861	421528	463194	7	000081
8	255556	297222	338889	380556	422222	463889	8	000093
9	256250	297917	339583	381250	422917	464583	9	000104
10	0.256944	0.298611	0.340278	0.381944	0.423611	0.465278	10	0.000116
11	257639	299306	340972	382639	424306	465972	11	000127
12	258333	300000	341667	383333	425000	466667	12	000139
13	259028	300694	342361	384028	425694	467361	13	000150
14	259722	301389	343056	384722	426389	468056	14	000162
15	0.260417	0.302083	0.343750	0.385417	0.427083	0.468750	15	0.000174
16	261111	302778	344444	386111	427778	469444	16	000185
17	261806	303472	345139	386806	428472	470139	17	000197
18	262500	304167	345833	387500	429167	470833	18	000208
19	263194	304861	346528	388194	429861	471528	19	000220
20	0.263889	0.305556	0.347222	0.388889	0.430556	0.472222	20	0.000231
21	264583	306250	347917	389583	431250	472917	21	000243
22	265278	306944	348611	390278	431944	473611	22	000255
23	265972	307639	349306	390972	432639	474306	23	000266
24	266667	308333	350000	391667	433333	475000	24	000278
25	0.267361	0.309028	0.350694	0.392361	0.434028	0.475694	25	0.000289
26	268056	309722	351389	393056	434722	476389	26	000301
27	268750	310417	352083	393750	435417	477083	27	000313
28	269444	311111	352778	394444	436111	477778	28	000324
29	270139	311806	353472	395139	436806	478472	29	000336
30	0.270833	0.312500	0.354167	0.395833	0.437500	0.479167	30	0.000347
31	271528	313194	354861	396528	438194	479861	31	000359
32	272222	313889	355556	397222	438889	480556	32	000370
33	272917	314583	356250	397917	439583	481250	33	000382
34	273611	315278	356944	398611	440278	481944	34	000394
35	0.274306	0.315972	0.357639	0.399306	0.440972	0.482639	35	0.000405
36	275000	316667	358333	400000	441667	483333	36	000417
37	275694	317361	359028	400694	442361	484028	37	000428
38	276389	318056	359722	401389	443056	484722	38	000440
39	277083	318750	360417	402083	443750	485417	39	000451
40	0.277778	0.319444	0.361111	0.402778	0.444444	0.486111	40	0.000463
41	278472	320139	361806	403472	445139	486806	41	000475
42	279167	320833	362500	404167	445833	487500	42	000486
43	279861	321528	363194	404861	446528	488194	43	000498
44	280556	322222	363889	405556	447222	488889	44	000509
45	0.281250	0.322917	0.364583	0.406250	0.447917	0.489583	45	0.000521
46	281944	323611	365278	406944	448611	490278	46	000532
47	282639	324306	365972	407639	449306	490972	47	000544
48	283333	325000	366667	408333	450000	491667	48	000556
49	284028	325694	367361	409028	450694	492361	49	000567
50	0.284722	0.326389	0.368056	0.409722	0.451389	0.493056	50	0.000579
51	285417	327083	368750	410417	452083	493750	51	000590
52	286111	327778	369444	411111	452778	494444	52	000602
53	286806	328472	370139	411806	453472	495139	53	000613
54	287500	329167	370833	412500	454167	495833	54	000625
55	0.288194	0.329861	0.371528	0.413194	0.454861	0.496528	55	0.000637
56	288889	330556	372222	413889	455556	497222	56	000648
57	289583	331250	372917	414583	456250	497917	57	000660
58	290278	331944	373611	415278	456944	498611	58	000671
59	0.290972	0.332639	0.374306	0.415972	0.457639	0.499306	59	0.000683

I. Anzahl der am o. Januar, 12^h Welt-Zeit, seit Anfang der Periode verflossenen Tage

Jahr n. Chr.	0	100	200	300	400	500	600	700	800	900
	17	17	17	18	18	19	19	19	20	20
0	21057	57582	94107	30632	67157	03682	40207	76732	13257	49782
4	22518	59043	95568	32093	68618	05143	41668	78193	14718	51243
8	23979	60504	97029	33554	70079	06604	43129	79654	16179	52704
12	25440	61965	98490	35015	71540	08065	44590	81115	17640	54165
16	26901	63426	99951	36476	73001	09526	46051	82576	19101	55626
20	28362	64887	01412	37937	74462	10987	47512	84037	20562	57087
24	29823	66348	02873	39398	75923	12448	48973	85498	22023	58548
28	31284	67809	04334	40859	77384	13909	50434	86959	23484	60009
32	32745	69270	05795	42320	78845	15370	51895	88420	24945	61470
36	34206	70731	07256	43781	80306	16831	53356	89881	26406	62931
40	35667	72192	08717	45242	81767	18292	54817	91342	27867	64392
44	37128	73653	10178	46703	83228	19753	56278	92803	29328	65853
48	38589	75114	11639	48164	84689	21214	57739	94264	30789	67314
52	40050	76575	13100	49625	86150	22675	59200	95725	32250	68775
56	41511	78036	14561	51086	87611	24136	60661	97186	33711	70236
60	42972	79497	16022	52547	89072	25597	62122	98647	35172	71697
64	44433	80958	17483	54008	90533	27058	63583	00108	36633	73158
68	45894	82419	18944	55469	91994	28519	65044	01569	38094	74619
72	47355	83880	20405	56930	93455	29980	66505	03030	39555	76080
76	48816	85341	21866	58391	94916	31441	67966	04491	41016	77541
80	50277	86802	23327	59852	96377	32902	69427	05952	42477	79002
84	51738	88263	24788	61313	97838	34363	70888	07413	43938	80463
88	53199	89724	26249	62774	99299	35824	72349	08874	45399	81924
92	54660	91185	27710	64235	00760	37285	73810	10335	46860	83385
96	56121	92646	29171	65696	02221	38746	75271	11796	48321	84846
100	57582	94107	30632	67157	03682	40207	76732	13257	49782	86307
	17	17	18	18	19	19	19	20	20	20

Ia. Anzahl der am o. eines jeden Monats, 12^h Welt-Zeit, seit Beginn der Schaltperiode verflossenen Tage

Jahr	Jan. o	Febr. o	März o	April o	Mai o	Juni o	Juli o	Aug. o	Sept. o	Okt. o	Nov. o	Dez. o
0	0	31	60	91	121	152	182	213	244	274	305	335
1	366	397	425	456	486	517	547	578	609	639	670	700
2	731	762	790	821	851	882	912	943	974	1004	1035	1065
3	1096	1127	1155	1186	1216	1247	1277	1308	1339	1369	1400	1430

I. Anzahl der am o. Januar, 12^h Welt-Zeit, seit Anfang der Periode verflossenen Tage

Jahr n. Chr.	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900
	20	21	21	21	22	22	23	23	23	24
0	86307	22832	59357	95882	32407	68932	05447	41971 [1]	78495 [1]	15019 [1]
4	87768	24293	60818	97343	33868	70393	06908	43432	79956	16480
8	89229	25754	62279	98804	35329	71854	08369	44893	81417	17941
12	90690	27215	63740	00265	36790	73315	09830	46354	82878	19402
16	92151	28676	65201	01726	38251	74776	11291	47815	84339	20863
20	93612	30137	66662	03187	39712	76237	12752	49276	85800	22324
24	95073	31598	68123	04648	41173	77698	14213	50737	87261	23785
28	96534	33059	69584	06109	42634	79159	15674	52198	88722	25246
32	97995	34520	71045	07570	44095	80620	17135	53659	90183	26707
36	99456	35981	72506	09031	45556	82081	18596	55120	91644	28168
40	00917	37442	73967	10492	47017	83542	20057	56581	93105	29629
44	02378	38903	75428	11953	48478	85003	21518	58042	94566	31090
48	03839	40364	76889	13414	49939	86464	22979	59503	96027	32551
52	05300	41825	78350	14875	51400	87925	24440	60964	97488	34012
56	06761	43286	79811	16336	52861	89386	25901	62425	98949	35473
60	08222	44747	81272	17797	54322	90847	27362	63886	00410	36934
64	09683	46208	82733	19258	55783	92308	28823	65347	01871	38395
68	11144	47669	84194	20719	57244	93769	30284	66808	03332	39856
72	12605	49130	85655	22180	58705	95230	31745	68269	04793	41317
76	14066	50591	87116	23641	60166	96691	33206	69730	06254	42778
80	15527	52052	88577	25102	61627	98152	34667	71191	07715	44239
84	16988	53513	90038	26563	63088	99603	36128	72652	09176	45700
88	18449	54974	91499	28024	64549	01064	37589	74113	10637	47161
92	19910	56435	92960	29485	66010	02525	39050	75574	12098	48622
96	21371	57896	94421	30946	67471	03986	40511	77035	13559	50083
100	22832	59357	95882	32407	68932	05447	41971 [1]	78495 [1]	15019 [1]	51544
	21	21	21	22	22	23	23	23	24	24

[1] Die Zahlen geben die am —1. Jan. seit Anfang der Periode verflossenen Tage

Ia. Anzahl der am o. eines jeden Monats, 12^h Welt-Zeit, seit Beginn der Schaltperiode verflossenen Tage

Jahr	Jan. o	Febr. o	März o	April o	Mai o	Juni o	Juli o	Aug. o	Sept. o	Okt. o	Nov. o	Dez. o
0	0 [2]	31 [2]	60	91	121	152	182	213	244	274	305	335
1	366	397	425	456	486	517	547	578	609	639	670	700
2	731	762	790	821	851	882	912	943	974	1004	1035	1065
3	1096	1127	1155	1186	1216	1247	1277	1308	1339	1369	1400	1430

Von 1582 Okt. 15 bis 1583 Dez. 31 sind die Zahlen der Tafel Ia um 10 zu verkleinern

[2] In den Jahren 1700, 1800, 1900 um 1 zu vergrößern

Julianische Periode

II. Anzahl der am 0. eines jeden Monats, 12ʰ Welt-Zeit, seit Beginn der Periode verflossenen Tage

Jahr n. Chr.	Januar 0	Febr. 0	März 0	April 0	Mai 0	Juni 0	Juli 0	Aug. 0	Sept. 0	Okt. 0	Nov. 0	Dez. 0
1860	2400 410	441	470	501	531	562	592	623	654	684	715	745
1861	776	807	835	866	896	927	957	988	*019	*049	*080	*110
1862	2401 141	172	200	231	261	292	322	353	384	414	445	475
1863	506	537	565	596	626	657	687	718	749	779	810	840
1864	871	902	931	962	992	*023	*053	*084	*115	*145	*176	*206
1865	2402 237	268	296	327	357	388	418	449	480	510	541	571
1866	602	633	661	692	722	753	783	814	845	875	906	936
1867	967	998	*026	*057	*087	*118	*148	*179	*210	*240	*271	*301
1868	2403 332	363	392	423	453	484	514	545	576	606	637	667
1869	698	729	757	788	818	849	879	910	941	971	*002	*032
1870	2404 063	094	122	153	183	214	244	275	306	336	367	397
1871	428	459	487	518	548	579	609	640	671	701	732	762
1872	793	824	853	884	914	945	975	*006	*037	*067	*098	*128
1873	2405 159	190	218	249	279	310	340	371	402	432	463	493
1874	524	555	583	614	644	675	705	736	767	797	828	858
1875	889	920	948	979	*009	*040	*070	*101	*132	*162	*193	*223
1876	2406 254	285	314	345	375	406	436	467	498	528	559	589
1877	620	651	679	710	740	771	801	832	863	893	924	954
1878	985	*016	*044	*075	*105	*136	*166	*197	*228	*258	*289	*319
1879	2407 350	381	409	440	470	501	531	562	593	623	654	684
1880	715	746	775	806	836	867	897	928	959	989	*020	*050
1881	2408 081	112	140	171	201	232	262	293	324	354	385	415
1882	446	477	505	536	566	597	627	658	689	719	750	780
1883	811	842	870	901	931	962	992	*023	*054	*084	*115	*145
1884	2409 176	207	236	267	297	328	358	389	420	450	481	511
1885	542	573	601	632	662	693	723	754	785	815	846	876
1886	907	938	966	997	*027	*058	*088	*119	*150	*180	*211	*241
1887	2410 272	303	331	362	392	423	453	484	515	545	576	606
1888	637	668	697	728	758	789	819	850	881	911	942	972
1889	2411 003	034	062	093	123	154	184	215	246	276	307	337
1890	368	399	427	458	488	519	549	580	611	641	672	702
1891	733	764	792	823	853	884	914	945	976	*006	*037	*067
1892	2412 098	129	158	189	219	250	280	311	342	372	403	433
1893	464	495	523	554	584	615	645	676	707	737	768	798
1894	829	860	888	919	949	980	*010	*041	*072	*102	*133	*163
1895	2413 194	225	253	284	314	345	375	406	437	467	498	528
1896	559	590	619	650	680	711	741	772	803	833	864	894
1897	925	956	984	*015	*045	*076	*106	*137	*168	*198	*229	*259
1898	2414 290	321	349	380	410	441	471	502	533	563	594	624
1899	655	686	714	745	775	806	836	867	898	928	959	989

Julianische Periode

II. Anzahl der am 0. eines jeden Monats, 12^h Welt-Zeit, seit Beginn der Periode verflossenen Tage

Jahr n. Chr.	Januar 0	Febr. 0	März 0	April 0	Mai 0	Juni 0	Juli 0	Aug. 0	Sept. 0	Okt. 0	Nov. 0	Dez. 0
1900	2415 020	051	079	110	140	171	201	232	263	293	324	354
1901	385	416	444	475	505	536	566	597	628	658	689	719
1902	750	781	809	840	870	901	931	962	993	*023	*054	*084
1903	2416 115	146	174	205	235	266	296	327	358	388	419	449
1904	480	511	540	571	601	632	662	693	724	754	785	815
1905	846	877	905	936	966	997	*027	*058	*089	*119	*150	*180
1906	2417 211	242	270	301	331	362	392	423	454	484	515	545
1907	576	607	635	666	696	727	757	788	819	849	880	910
1908	941	972	*001	*032	*062	*093	*123	*154	*185	*215	*246	*276
1909	2418 307	338	366	397	427	458	488	519	550	580	611	641
1910	672	703	731	762	792	823	853	884	915	945	976	*006
1911	2419 037	068	096	127	157	188	218	249	280	310	341	371
1912	402	433	462	493	523	554	584	615	646	676	707	737
1913	768	799	827	858	888	919	949	980	*011	*041	*072	*102
1914	2420 133	164	192	223	253	284	314	345	376	406	437	467
1915	498	529	557	588	618	649	679	710	741	771	802	832
1916	863	894	923	954	984	*015	*045	*076	*107	*137	*168	*198
1917	2421 229	260	288	319	349	380	410	441	472	502	533	563
1918	594	625	653	684	714	745	775	806	837	867	898	928
1919	959	990	*018	*049	*079	*110	*140	*171	*202	*232	*263	*293
1920	2422 324	355	384	415	445	476	506	537	568	598	629	659
1921	690	721	749	780	810	841	871	902	933	963	994	*024
1922	2423 055	086	114	145	175	206	236	267	298	328	359	389
1923	420	451	479	510	540	571	601	632	663	693	724	754
1924	785	816	845	876	906	937	967	998	*029	*059	*090	*120
1925	2424 151	182	210	241	271	302	332	363	394	424	455	485
1926	516	547	575	606	636	667	697	728	759	789	820	850
1927	881	912	940	971	*001	*032	*062	*093	*124	*154	*185	*215
1928	2425 246	277	306	337	367	398	428	459	490	520	551	581
1929	612	643	671	702	732	763	793	824	855	885	916	946
1930	977	*008	*036	*067	*097	*128	*158	*189	*220	*250	*281	*311
1931	2426 342	373	401	432	462	493	523	554	585	615	646	676
1932	707	738	767	798	828	859	889	920	951	981	*012	*042
1933	2427 073	104	132	163	193	224	254	285	316	346	377	407
1934	438	469	497	528	558	589	619	650	681	711	742	772
1935	803	834	862	893	923	954	984	*015	*046	*076	*107	*137
1936	2428 168	199	228	259	289	320	350	381	412	442	473	503
1937	534	565	593	624	654	685	715	746	777	807	838	868
1938	899	930	958	989	*019	*050	*080	*111	*142	*172	*203	*233
1939	2429 264	295	323	354	384	415	445	476	507	537	568	598

Julianische Periode

II. Anzahl der am 0. eines jeden Monats, 12h Welt-Zeit, seit Beginn der Periode verflossenen Tage

Jahr n. Chr.	Januar 0	Febr. 0	März 0	April 0	Mai 0	Juni 0	Juli 0	Aug. 0	Sept. 0	Okt. 0	Nov. 0	Dez. 0
1940	2429 629	660	689	720	750	781	811	842	873	903	934	964
1941	995	*026	*054	*085	*115	*146	*176	*207	*238	*268	*299	*329
1942	2430 360	391	419	450	480	511	541	572	603	633	664	694
1943	725	756	784	815	845	876	906	937	968	998	*029	*059
1944	2431 090	121	150	181	211	242	272	303	334	364	395	425
1945	456	487	515	546	576	607	637	668	699	729	760	790
1946	821	852	880	911	941	972	*002	*033	*064	*094	*125	*155
1947	2432 186	217	245	276	306	337	367	398	429	459	490	520
1948	551	582	611	642	672	703	733	764	795	825	856	886
1949	917	948	976	*007	*037	*068	*098	*129	*160	*190	*221	*251
1950	2433 282	313	341	372	402	433	463	494	525	555	586	616
1951	647	678	706	737	767	798	828	859	890	920	951	981
1952	2434 012	043	072	103	133	164	194	225	256	286	317	347
1953	378	409	437	468	498	529	559	590	621	651	682	712
1954	743	774	802	833	863	894	924	955	986	*016	*047	*077
1955	2435 108	139	167	198	228	259	289	320	351	381	412	442
1956	473	504	533	564	594	625	655	686	717	747	778	808
1957	839	870	898	929	959	990	*020	*051	*082	*112	*143	*173
1958	2436 204	235	263	294	324	355	385	416	447	477	508	538
1959	569	600	628	659	689	720	750	781	812	842	873	903
1960	934	965	994	*025	*055	*086	*116	*147	*178	*208	*239	*269
1961	2437 300	331	359	390	420	451	481	512	543	573	604	634
1962	665	696	724	755	785	816	846	877	908	938	969	999
1963	2438 030	061	089	120	150	181	211	242	273	303	334	364
1964	395	426	455	486	516	547	577	608	639	669	700	730
1965	761	792	820	851	881	912	942	973	*004	*034	*065	*095
1966	2439 126	157	185	216	246	277	307	338	369	399	430	460
1967	491	522	550	581	611	642	672	703	734	764	795	825
1968	856	887	916	947	977	*008	*038	*069	*100	*130	*161	*191
1969	2440 222	253	281	312	342	373	403	434	465	495	526	556
1970	587	618	646	677	707	738	768	799	830	860	891	921
1971	952	983	*011	*042	*072	*103	*133	*164	*195	*225	*256	*286
1972	2441 317	348	377	408	438	469	499	530	561	591	622	652
1973	683	714	742	773	803	834	864	895	926	956	987	*017
1974	2442 048	079	107	138	168	199	229	260	291	321	352	382
1975	413	444	472	503	533	564	594	625	656	686	717	747
1976	778	809	838	869	899	930	960	991	*022	*052	*083	*113
1977	2443 144	175	203	234	264	295	325	356	387	417	448	478
1978	509	540	568	599	629	660	690	721	752	782	813	843
1979	2443 874	905	933	964	994	*025	*055	*086	*117	*147	*178	*208

′	″	°	′	″	°	″	°	″	°
0	0.0	0.000	3	0.0	0.050	0.000	0.00000	1.800	0.00050
	3.6	1		3.6	51	036	1	836	51
	7.2	2		7.2	52	072	2	872	52
	10.8	3		10.8	53	108	3	908	53
	14.4	4		14.4	54	144	4	944	54
0	18.0	0.005	3	18.0	0.055	0.180	0.00005	1.980	0.00055
	21.6	6		21.6	56	216	6	2.016	56
	25.2	7		25.2	57	252	7	052	57
	28.8	8		28.8	58	288	8	088	58
	32.4	9		32.4	59	324	9	124	59
0	36.0	0.010	3	36.0	0.060	0.360	0.00010	2.160	0.00060
	39.6	11		39.6	61	396	11	196	61
	43.2	12		43.2	62	432	12	232	62
	46.8	13		46.8	63	468	13	268	63
	50.4	14		50.4	64	504	14	304	64
	54.0	0.015		54.0	0.065	0.540	0.00015	2.340	0.00065
0	57.6	16	3	57.6	66	576	16	376	66
1	1.2	17	4	1.2	67	612	17	412	67
	4.8	18		4.8	68	648	18	448	68
	8.4	19		8.4	69	684	19	484	69
1	12.0	0.020	4	12.0	0.070	0.720	0.00020	2.520	0.00070
	15.6	21		15.6	71	756	21	556	71
	19.2	22		19.2	72	792	22	592	72
	22.8	23		22.8	73	828	23	628	73
	26.4	24		26.4	74	864	24	664	74
1	30.0	0.025	4	30.0	0.075	0.900	0.00025	2.700	0.00075
	33.6	26		33.6	76	936	26	736	76
	37.2	27		37.2	77	0.972	27	772	77
	40.8	28		40.8	78	1.008	28	808	78
	44.4	29		44.4	79	044	29	844	79
1	48.0	0.030	4	48.0	0.080	1.080	0.00030	2.880	0.00080
	51.6	31		51.6	81	116	31	916	81
	55.2	32		55.2	82	152	32	952	82
1	58.8	33	4	58.8	83	188	33	2.988	83
2	2.4	34	5	2.4	84	224	34	3.024	84
	6.0	0.035		6.0	0.085	1.260	0.00035	060	0.00085
	9.6	36		9.6	86	296	36	096	86
	13.2	37		13.2	87	332	37	132	87
	16.8	38		16.8	88	368	38	168	88
	20.4	39		20.4	89	404	39	204	89
2	24.0	0.040	5	24.0	0.090	1.440	0.00040	3.240	0.00090
	27.6	41		27.6	91	476	41	276	91
	31.2	42		31.2	92	512	42	312	92
	34.8	43		34.8	93	548	43	348	93
	38.4	44		38.4	94	584	44	384	94
2	42.0	0.045	5	42.0	0.095	1.620	0.00045	3.420	0.00095
	45.6	46		45.6	96	656	46	456	96
	49.2	47		49.2	97	692	47	492	97
	52.8	48		52.8	98	728	48	528	98
	56.4	49		56.4	99	764	49	564	99
3	0.0	0.050	6	0.0	0.100	1.800	0.00050	3.600	0.00100

δ \ φ	+30°	+32°	+34°	+36°	+38°	+40°	+42°	+44°	+46°	+48°	+50°
°	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
−30	4 45.4	4 38.8	4 31.8	4 24.4	4 16.5	4 8.1	3 58.9	3 48.9	3 37.9	3 25.7	3 11.8
29	4 48.6	4 42.3	4 35.6	4 28.6	4 21.1	4 13.0	4 4.3	3 54.9	3 44.5	3 33.0	3 20.1
28	4 51.7	4 45.7	4 39.3	4 32.6	4 25.5	4 17.8	4 9.6	4 0.7	3 50.9	3 40.1	3 28.0
27	4 54.7	4 49.0	4 42.9	4 36.5	4 29.8	4 22.5	4 14.7	4 6.2	3 57.0	3 46.9	3 35.5
26	4 57.7	4 52.2	4 46.5	4 40.4	4 33.9	4 27.1	4 19.7	4 11.7	4 3.0	3 53.4	3 42.8
25	5 0.6	4 55.4	4 49.9	4 44.2	4 38.0	4 31.5	4 24.5	4 16.9	4 8.7	3 59.7	3 49.7
24	5 3.5	4 58.5	4 53.3	4 47.8	4 42.0	4 35.8	4 29.2	4 22.0	4 14.3	4 5.8	3 56.5
23	5 6.3	5 1.6	4 56.6	4 51.4	4 45.9	4 40.1	4 33.8	4 27.0	4 19.7	4 11.8	4 3.0
22	5 9.0	5 4.6	4 59.9	4 55.0	4 49.7	4 44.2	4 38.3	4 31.9	4 25.0	4 17.5	4 9.3
21	5 11.7	5 7.5	5 3.1	4 58.4	4 53.5	4 48.3	4 42.7	4 36.7	4 30.2	4 23.2	4 15.4
−20	5 14.4	5 10.4	5 6.2	5 1.8	4 57.2	4 52.3	4 47.0	4 41.3	4 35.3	4 28.7	4 21.4
19	5 17.0	5 13.3	5 9.3	5 5.2	5 0.8	4 56.2	4 51.2	4 45.9	4 40.2	4 34.0	4 27.3
18	5 19.6	5 16.1	5 12.4	5 8.5	5 4.4	5 0.0	4 55.4	4 50.4	4 45.1	4 39.3	4 33.0
17	5 22.2	5 18.9	5 15.4	5 11.7	5 7.9	5 3.8	4 59.5	4 54.9	4 49.9	4 44.5	4 38.6
16	5 24.7	5 21.6	5 18.4	5 14.9	5 11.4	5 7.5	5 3.5	4 59.2	4 54.6	4 49.5	4 44.1
15	5 27.2	5 24.3	5 21.3	5 18.1	5 14.8	5 11.2	5 7.5	5 3.5	4 59.2	4 54.5	4 49.5
14	5 29.7	5 27.0	5 24.2	5 21.3	5 18.2	5 14.9	5 11.4	5 7.7	5 3.7	4 59.5	4 54.8
13	5 32.1	5 29.7	5 27.1	5 24.4	5 21.5	5 18.5	5 15.3	5 11.9	5 8.2	5 4.3	5 0.0
12	5 34.6	5 32.3	5 29.9	5 27.4	5 24.8	5 22.1	5 19.1	5 16.0	5 12.6	5 9.0	5 5.1
11	5 37.0	5 34.9	5 32.7	5 30.5	5 28.1	5 25.6	5 22.9	5 20.1	5 17.0	5 13.7	5 10.2
−10	5 39.4	5 37.5	5 35.5	5 33.5	5 31.3	5 29.1	5 26.7	5 24.1	5 21.4	5 18.4	5 15.2
9	5 41.7	5 40.1	5 38.3	5 36.5	5 34.6	5 32.5	5 30.4	5 28.1	5 25.7	5 23.0	5 20.2
8	5 44.1	5 42.6	5 41.1	5 39.5	5 37.8	5 36.0	5 34.1	5 32.1	5 29.9	5 27.6	5 25.1
7	5 46.4	5 45.2	5 43.8	5 42.4	5 41.0	5 39.4	5 37.8	5 36.0	5 34.2	5 32.2	5 30.0
6	5 48.8	5 47.7	5 46.6	5 45.4	5 44.1	5 42.8	5 41.4	5 40.0	5 38.4	5 36.7	5 34.9
5	5 51.1	5 50.2	5 49.3	5 48.3	5 47.3	5 46.2	5 45.1	5 43.9	5 42.6	5 41.2	5 39.7
4	5 53.4	5 52.7	5 52.0	5 51.2	5 50.4	5 49.6	5 48.7	5 47.8	5 46.8	5 45.7	5 44.5
3	5 55.8	5 55.2	5 54.7	5 54.1	5 53.6	5 53.0	5 52.3	5 51.6	5 50.9	5 50.1	5 49.3
2	5 58.1	5 57.7	5 57.4	5 57.1	5 56.7	5 56.3	5 55.9	5 55.5	5 55.1	5 54.6	5 54.1
− 1	6 0.4	6 0.2	6 0.1	6 0.0	5 59.8	5 59.7	5 59.5	5 59.4	5 59.2	5 59.0	5 58.9
0	6 2.7	6 2.7	6 2.8	6 2.9	6 2.9	6 3.0	6 3.1	6 3.2	6 3.4	6 3.5	6 3.6
+ 1	6 5.0	6 5.2	6 5.5	6 5.8	6 6.1	6 6.4	6 6.7	6 7.1	6 7.5	6 7.9	6 8.4
2	6 7.3	6 7.7	6 8.2	6 8.7	6 9.2	6 9.8	6 10.3	6 11.0	6 11.6	6 12.4	6 13.2
3	6 9.6	6 10.3	6 10.9	6 11.6	6 12.3	6 13.1	6 14.0	6 14.8	6 15.8	6 16.8	6 18.0
4	6 11.9	6 12.8	6 13.6	6 14.5	6 15.5	6 16.5	6 17.6	6 18.7	6 20.0	6 21.3	6 22.8
5	6 14.3	6 15.3	6 16.4	6 17.5	6 18.6	6 19.9	6 21.2	6 22.6	6 24.2	6 25.8	6 27.6
6	6 16.6	6 17.8	6 19.1	6 20.4	6 21.8	6 23.3	6 24.9	6 26.6	6 28.4	6 30.4	6 32.5
7	6 19.0	6 20.4	6 21.8	6 23.4	6 25.0	6 26.7	6 28.6	6 30.5	6 32.6	6 34.9	6 37.4
8	6 21.3	6 22.9	6 24.6	6 26.4	6 28.2	6 30.2	6 32.3	6 34.5	6 36.9	6 39.5	6 42.3
9	6 23.7	6 25.5	6 27.4	6 29.4	6 31.4	6 33.7	6 36.0	6 38.5	6 41.2	6 44.1	6 47.3
10	6 26.1	6 28.1	6 30.2	6 32.4	6 34.7	6 37.2	6 39.8	6 42.5	6 45.6	6 48.8	6 52.3
+11	6 28.5	6 30.7	6 33.0	6 35.4	6 38.0	6 40.7	6 43.6	6 46.6	6 49.9	6 53.5	6 57.4
12	6 31.0	6 33.4	6 35.9	6 38.5	6 41.3	6 44.3	6 47.4	6 50.8	6 54.4	6 58.3	7 2.5
13	6 33.4	6 36.0	6 38.8	6 41.6	6 44.7	6 47.9	6 51.3	6 54.9	6 58.9	7 3.1	7 7.8
14	6 35.9	6 38.7	6 41.7	6 44.8	6 48.0	6 51.5	6 55.2	6 59.2	7 3.4	7 8.0	7 13.1
15	6 38.4	6 41.4	6 44.6	6 47.9	6 51.5	6 55.2	6 59.2	7 3.5	7 8.1	7 13.0	7 18.5
16	6 41.0	6 44.2	6 47.6	6 51.2	6 54.9	6 58.9	7 3.2	7 7.8	7 12.7	7 18.1	7 23.9
17	6 43.5	6 47.0	6 50.6	6 54.4	6 58.5	7 2.7	7 7.3	7 12.2	7 17.5	7 23.3	7 29.5
18	6 46.1	6 49.8	6 53.7	6 57.7	7 2.0	7 6.6	7 11.5	7 16.7	7 22.4	7 28.5	7 35.3
19	6 48.8	6 52.7	6 56.8	7 1.1	7 5.7	7 10.5	7 15.7	7 21.3	7 27.4	7 33.9	7 41.1
20	6 51.5	6 55.6	6 59.9	7 4.5	7 9.4	7 14.5	7 20.1	7 26.0	7 32.4	7 39.4	7 47.1
+21	6 54.2	6 58.6	7 3.1	7 8.0	7 13.1	7 18.6	7 24.5	7 30.8	7 37.6	7 45.1	7 53.3
22	6 56.9	7 1.6	7 6.4	7 11.5	7 17.0	7 22.8	7 29.0	7 35.7	7 42.9	7 50.9	7 59.6
23	6 59.8	7 4.6	7 9.7	7 15.1	7 20.9	7 27.0	7 33.6	7 40.7	7 48.4	7 56.8	8 6.1
24	7 2.6	7 7.7	7 13.1	7 18.8	7 24.9	7 31.3	7 38.3	7 45.8	7 54.0	8 2.9	8 12.9
25	7 5.6	7 10.9	7 16.6	7 22.6	7 29.0	7 35.8	7 43.1	7 51.1	7 59.8	8 9.3	8 19.9
26	7 8.5	7 14.2	7 20.1	7 26.4	7 33.2	7 40.4	7 48.1	7 56.5	8 5.7	8 15.8	8 27.1
27	7 11.6	7 17.5	7 23.8	7 30.4	7 37.5	7 45.0	7 53.2	8 2.1	8 11.8	8 22.6	8 34.7
28	7 14.7	7 20.9	7 27.5	7 34.4	7 41.9	7 49.9	7 58.5	8 7.9	8 18.2	8 29.7	8 42.6
29	7 17.9	7 24.4	7 31.3	7 38.6	7 46.4	7 54.8	8 3.9	8 13.9	8 24.8	8 37.1	8 51.0
+30	7 21.2	7 28.0	7 35.2	7 42.9	7 51.1	7 59.9	8 9.5	8 20.1	8 31.7	8 44.8	8 59.7

δ \ φ	+50°	+51°	+52°	+53°	+54°	+55°	+56°	+57°	+58°	+59°	+60°
°	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
−30	3 11.8	3 4.1	2 55.8	2 46.8	2 36.9	2 25.9	2 13.5	1 59.3	1 42.4	1 21.1	0 49.7
29	3 20.1	3 12.9	3 5.3	2 57.0	2 48.0	2 38.1	2 27.1	2 14.7	2 0.4	1 43.4	1 21.9
28	3 28.0	3 21.3	3 14.2	3 6.6	2 58.3	2 49.3	2 39.4	2 28.4	2 15.9	2 1.6	1 44.5
27	3 35.5	3 29.3	3 22.7	3 15.7	3 8.0	2 59.8	2 50.8	2 40.8	2 29.8	2 17.3	2 2.9
26	3 42.8	3 37.0	3 30.8	3 24.2	3 17.2	3 9.6	3 1.4	2 52.4	2 42.4	2 31.3	2 18.8
25	3 49.7	3 44.3	3 38.6	3 32.4	3 25.9	3 18.9	3 11.3	3 3.1	2 54.1	2 44.1	2 33.0
24	3 56.5	3 51.4	3 46.0	3 40.3	3 34.3	3 27.8	3 20.8	3 13.2	3 5.0	2 56.0	2 46.0
23	4 3.0	3 58.2	3 53.2	3 47.9	3 42.3	3 36.2	3 29.8	3 22.8	3 15.3	3 7.1	2 58.0
22	4 9.3	4 4.9	4 0.2	3 55.2	3 50.0	3 44.3	3 38.4	3 31.9	3 25.0	3 17.5	3 9.3
21	4 15.4	4 11.3	4 6.9	4 2.3	3 57.4	3 52.2	3 46.6	3 40.7	3 34.3	3 27.4	3 19.9
−20	4 21.4	4 17.5	4 13.5	4 9.1	4 4.6	3 59.8	3 54.6	3 49.1	3 43.2	3 36.9	3 30.0
19	4 27.3	4 23.7	4 19.9	4 15.8	4 11.6	4 7.1	4 2.3	3 57.2	3 51.8	3 45.9	3 39.6
18	4 33.0	4 29.6	4 26.1	4 22.3	4 18.4	4 14.2	4 9.8	4 5.1	4 0.1	3 54.7	3 48.9
17	4 38.6	4 35.4	4 32.1	4 28.7	4 25.0	4 21.1	4 17.0	4 12.7	4 8.1	4 3.1	3 57.8
16	4 44.1	4 41.2	4 38.1	4 34.9	4 31.5	4 27.9	4 24.1	4 20.1	4 15.9	4 11.3	4 6.4
15	4 49.5	4 46.8	4 43.9	4 41.0	4 37.8	4 34.5	4 31.0	4 27.4	4 23.4	4 19.3	4 14.8
14	4 54.8	4 52.3	4 49.7	4 46.9	4 44.1	4 41.0	4 37.8	4 34.4	4 30.8	4 27.0	4 22.9
13	5 0.0	4 57.7	4 55.3	4 52.8	4 50.2	4 47.4	4 44.5	4 41.4	4 38.1	4 34.6	4 30.9
12	5 5.1	5 3.0	5 0.9	4 58.6	4 56.2	4 53.7	4 51.0	4 48.2	4 45.2	4 42.0	4 38.7
11	5 10.2	5 8.3	5 6.4	5 4.3	5 2.1	4 59.8	4 57.4	4 54.9	4 52.2	4 49.3	4 46.3
−10	5 15.2	5 13.5	5 11.8	5 9.9	5 7.9	5 5.9	5 3.7	5 1.5	4 59.1	4 56.5	4 53.8
9	5 20.2	5 18.7	5 17.1	5 15.5	5 13.7	5 11.9	5 10.0	5 8.0	5 5.8	5 3.6	5 1.2
8	5 25.1	5 23.8	5 22.4	5 21.0	5 19.5	5 17.9	5 16.2	5 14.4	5 12.5	5 10.6	5 8.5
7	5 30.0	5 28.9	5 27.7	5 26.4	5 25.1	5 23.8	5 22.3	5 20.8	5 19.2	5 17.5	5 15.7
6	5 34.9	5 33.9	5 32.9	5 31.8	5 30.7	5 29.6	5 28.4	5 27.1	5 25.7	5 24.3	5 22.8
5	5 39.7	5 38.9	5 38.1	5 37.2	5 36.3	5 35.4	5 34.4	5 33.4	5 32.2	5 31.1	5 29.9
4	5 44.5	5 43.9	5 43.3	5 42.6	5 41.9	5 41.2	5 40.4	5 39.6	5 38.7	5 37.8	5 36.9
3	5 49.3	5 48.9	5 48.4	5 47.9	5 47.4	5 46.9	5 46.3	5 45.8	5 45.2	5 44.5	5 43.8
2	5 54.1	5 53.8	5 53.5	5 53.3	5 52.9	5 52.6	5 52.3	5 52.0	5 51.6	5 51.2	5 50.8
− 1	5 58.9	5 58.8	5 58.7	5 58.6	5 58.4	5 58.3	5 58.2	5 58.1	5 58.0	5 57.9	5 57.7
0	6 3.6	6 3.7	6 3.8	6 3.9	6 4.0	6 4.1	6 4.2	6 4.3	6 4.4	6 4.5	6 4.7
+ 1	6 8.4	6 8.6	6 8.9	6 9.2	6 9.5	6 9.8	6 10.1	6 10.4	6 10.8	6 11.2	6 11.6
2	6 13.2	6 13.6	6 14.0	6 14.5	6 15.0	6 15.5	6 16.0	6 16.6	6 17.2	6 17.8	6 18.5
3	6 18.0	6 18.6	6 19.2	6 19.8	6 20.5	6 21.2	6 22.0	6 22.8	6 23.6	6 24.6	6 25.5
4	6 22.8	6 23.5	6 24.4	6 25.2	6 26.1	6 27.0	6 28.0	6 29.0	6 30.1	6 31.3	6 32.5
5	6 27.6	6 28.6	6 29.6	6 30.6	6 31.7	6 32.8	6 34.0	6 35.3	6 36.6	6 38.1	6 39.6
6	6 32.5	6 33.6	6 34.8	6 36.0	6 37.3	6 38.7	6 40.1	6 41.6	6 43.2	6 44.9	6 46.7
7	6 37.4	6 38.7	6 40.0	6 41.5	6 43.0	6 44.6	6 46.2	6 48.0	6 49.8	6 51.8	6 53.9
8	6 42.3	6 43.8	6 45.3	6 47.0	6 48.7	6 50.5	6 52.4	6 54.4	6 56.5	6 58.8	7 1.2
9	6 47.3	6 48.9	6 50.7	6 52.6	6 54.5	6 56.5	6 58.7	7 0.9	7 3.3	7 5.9	7 8.6
10	6 52.3	6 54.1	6 56.1	6 58.2	7 0.3	7 2.6	7 5.0	7 7.5	7 10.2	7 13.1	7 16.2
+11	6 57.4	6 59.4	7 1.6	7 3.9	7 6.3	7 8.8	7 11.4	7 14.2	7 17.2	7 20.4	7 23.8
12	7 2.5	7 4.8	7 7.2	7 9.7	7 12.3	7 15.1	7 18.0	7 21.1	7 24.3	7 27.8	7 31.5
13	7 7.8	7 10.2	7 12.8	7 15.5	7 18.4	7 21.4	7 24.6	7 28.0	7 31.6	7 35.4	7 39.5
14	7 13.1	7 15.7	7 18.6	7 21.5	7 24.6	7 27.9	7 31.4	7 35.1	7 39.0	7 43.2	7 47.7
15	7 18.5	7 21.4	7 24.4	7 27.6	7 31.0	7 34.6	7 38.3	7 42.4	7 46.6	7 51.2	7 56.1
16	7 23.9	7 27.1	7 30.4	7 33.8	7 37.5	7 41.4	7 45.4	7 49.8	7 54.4	7 59.4	8 4.7
17	7 29.5	7 32.9	7 36.5	7 40.2	7 44.1	7 48.3	7 52.7	7 57.4	8 2.5	8 7.9	8 13.7
18	7 35.3	7 38.9	7 42.7	7 46.7	7 50.9	7 55.4	8 0.2	8 5.3	8 10.8	8 16.6	8 23.0
19	7 41.1	7 45.0	7 49.1	7 53.4	7 57.9	8 2.8	8 7.9	8 13.4	8 19.4	8 25.7	8 32.6
20	7 47.1	7 51.3	7 55.6	8 0.3	8 5.2	8 10.4	8 15.9	8 21.9	8 28.3	8 35.2	8 42.8
+21	7 53.3	7 57.7	8 2.4	8 7.3	8 12.6	8 18.2	8 24.2	8 30.7	8 37.6	8 45.2	8 53.5
22	7 59.6	8 4.3	8 9.4	8 14.7	8 20.3	8 26.4	8 32.8	8 39.8	8 47.4	8 55.7	9 4.8
23	8 6.1	8 11.2	8 16.6	8 22.3	8 28.3	8 34.9	8 41.9	8 49.5	8 57.7	9 6.8	9 16.9
24	8 12.9	8 18.3	8 24.0	8 30.2	8 36.7	8 43.8	8 51.4	8 59.6	9 8.7	9 18.8	9 30.0
25	8 19.9	8 25.7	8 31.8	8 38.4	8 45.5	8 53.1	9 1.4	9 10.5	9 20.5	9 31.7	9 44.4
26	8 27.1	8 33.4	8 40.0	8 47.0	8 54.7	9 3.0	9 12.1	9 22.1	9 33.2	9 45.9	10 0.6
27	8 34.7	8 41.4	8 48.5	8 56.1	9 4.4	9 13.5	9 23.5	9 34.6	9 47.3	10 1.9	10 19.5
28	8 42.6	8 49.8	8 57.5	9 5.8	9 14.8	9 24.8	9 35.9	9 48.5	10 3.1	10 20.5	10 42.9
29	8 51.0	8 58.7	9 7.0	9 16.1	9 26.0	9 37.1	9 49.6	10 4.1	10 21.5	10 43.7	11 18.1
+30	8 59.7	9 8.1	9 17.2	9 27.1	9 38.2	9 50.7	10 5.1	10 22.3	10 44.4	11 18.5	—

Reduktionstafel

für den Auf- und Untergang der Sonne

Das Vorzeichen der Tafel gilt für den Aufgang, das entgegengesetzte Vorzeichen für den Untergang.

Tag	Geographische Breite										
	+30°	+32°	+34°	+36°	+38°	+40°	+42°	+44°	+46°	+48°	+50°
1933	m	m	m	m	m	m	m	m	m	m	m
Jan. 1	−62.6	−57.9	−53.1	−48.0	−42.6	−36.7	−30.5	−23.8	−16.5	−8.7	0.0
11	−58.5	−54.0	−49.5	−44.6	−39.6	−34.1	−28.3	−22.1	−15.4	−8.0	0.0
21	−52.2	−48.2	−44.1	−39.7	−35.2	−30.3	−25.1	−19.6	−13.7	−7.1	0.0
31	−44.3	−41.0	−37.4	−33.7	−29.8	−25.7	−21.2	−16.5	−11.6	−6.0	0.0
Febr. 10	−35.5	−32.8	−29.9	−27.0	−23.9	−20.5	−16.9	−13.1	− 9.2	−4.8	0.0
20	−26.2	−24.2	−22.0	−19.9	−17.6	−15.1	−12.4	− 9.6	− 6.7	−3.5	0.0
März 2	−16.6	−15.3	−13.9	−12.6	−11.1	− 9.5	− 7.8	− 6.0	− 4.2	−2.2	0.0
12	− 6.9	− 6.4	− 5.8	− 5.3	− 4.6	− 3.9	− 3.2	− 2.5	− 1.8	−0.9	0.0
22	+ 2.8	+ 2.6	+ 2.4	+ 2.2	+ 1.9	+ 1.7	+ 1.4	+ 1.1	+ 0.7	+0.3	0.0
April 1	+12.4	+11.5	+10.5	+ 9.5	+ 8.4	+ 7.2	+ 6.0	+ 4.7	+ 3.2	+1.6	0.0
11	+22.1	+20.4	+18.7	+16.8	+14.8	+12.7	+10.5	+ 8.3	+ 5.6	+2.9	0.0
21	+31.6	+29.1	+26.7	+24.0	+21.1	+18.2	+15.1	+11.8	+ 8.1	+4.2	0.0
Mai 1	+40.7	+37.6	+34.3	+31.0	+27.4	+23.6	+19.7	+15.3	+10.6	+5.5	0.0
11	+49.3	+45.5	+41.6	+37.6	+33.4	+28.7	+23.9	+18.6	+12.9	+6.7	0.0
21	+56.8	+52.7	+48.2	+43.5	+38.7	+33.3	+27.7	+21.7	+15.0	+7.8	0.0
31	+63.0	+58.5	+53.6	+48.4	+43.0	+37.1	+30.9	+24.1	+16.8	+8.8	0.0
Juni 10	+67.2	+62.3	+57.2	+51.6	+45.8	+39.6	+33.0	+25.9	+18.0	+9.5	0.0
20	+68.8	+63.8	+58.6	+52.9	+47.0	+40.7	+33.9	+26.6	+18.5	+9.8	0.0
30	+67.9	+62.9	+57.8	+52.2	+46.4	+40.1	+33.4	+26.2	+18.2	+9.6	0.0
Juli 10	+64.4	+59.6	+54.7	+49.4	+43.9	+37.9	+31.6	+24.8	+17.2	+9.1	0.0
20	+58.8	+54.4	+49.9	+45.0	+40.0	+34.5	+28.6	+22.4	+15.6	+8.2	0.0
30	+51.6	+47.7	+43.8	+39.4	+35.0	+30.1	+25.0	+19.5	+13.6	+7.1	0.0
Aug. 9	+43.3	+40.0	+36.7	+33.0	+29.3	+25.2	+20.9	+16.3	+11.4	+5.9	0.0
19	+34.4	+31.8	+29.0	+26.2	+23.2	+20.0	+16.6	+12.8	+ 9.0	+4.7	0.0
29	+25.1	+23.2	+21.2	+19.2	+16.9	+14.6	+12.1	+ 9.3	+ 6.6	+3.4	0.0
Sept. 8	+15.7	+14.4	+13.2	+12.0	+10.6	+ 9.1	+ 7.5	+ 5.8	+ 4.1	+2.1	0.0
18	+ 6.2	+ 5.6	+ 5.1	+ 4.7	+ 4.2	+ 3.6	+ 2.9	+ 2.3	+ 1.7	+0.9	0.0
28	− 3.5	− 3.2	− 2.9	− 2.5	− 2.2	− 1.9	− 1.6	− 1.2	− 0.8	−0.4	0.0
Okt. 8	−13.1	−12.0	−10.9	− 9.8	− 8.6	− 7.4	− 6.1	− 4.8	− 3.2	−1.6	0.0
18	−22.6	−20.8	−19.0	−17.0	−15.0	−12.9	−10.6	− 8.3	− 5.6	−2.9	0.0
28	−31.9	−29.4	−26.9	−24.1	−21.3	−18.3	−15.1	−11.8	− 8.1	−4.2	0.0
Nov. 7	−40.8	−37.7	−34.4	−31.0	−27.4	−23.5	−19.5	−15.2	−10.4	−5.5	0.0
17	−49.0	−45.3	−41.4	−37.4	−33.0	−28.4	−23.6	−18.4	−12.7	−6.7	0.0
27	−56.0	−51.8	−47.4	−42.8	−37.9	−32.6	−27.2	−21.1	−14.7	−7.7	0.0
Dez. 7	−61.2	−56.6	−51.8	−46.8	−41.5	−35.7	−29.7	−23.2	−16.1	−8.5	0.0
17	−63.9	−59.1	−54.1	−48.9	−43.3	−37.4	−31.1	−24.3	−16.9	−8.9	0.0
27	−63.9	−59.1	−54.1	−48.9	−43.3	−37.4	−31.1	−24.3	−16.9	−8.9	0.0
37	−61.0	−56.4	−51.6	−46.6	−41.3	−35.7	−29.7	−23.2	−16.1	−8.4	0.0

Reduktionstafel

für den Auf- und Untergang der Sonne

Das Vorzeichen der Tafel gilt für den Aufgang, das entgegengesetzte Vorzeichen für den Untergang.

Tag	Geographische Breite										
	+50°	+51°	+52°	+53°	+54°	+55°	+56°	+57°	+58°	+59°	+60°
1933	m	m	m	m	m	m	m	m	m	m	m
Jan. 1	0.0	+4.7	+ 9.6	+14.8	+20.5	+26.4	+32.8	+39.6	+46.9	+55.0	+63.8
11	0.0	+4.4	+ 8.9	+13.8	+18.8	+24.3	+30.1	+36.3	+43.0	+50.3	+58.2
21	0.0	+3.8	+ 7.9	+12.1	+16.6	+21.2	+26.3	+31.7	+37.4	+43.6	+50.2
31	0.0	+3.2	+ 6.6	+10.1	+13.7	+17.7	+21.9	+26.3	+31.0	+36.1	+41.4
Febr. 10	0.0	+2.5	+ 5.2	+ 8.0	+10.8	+14.0	+17.2	+20.6	+24.3	+28.1	+32.3
20	0.0	+1.8	+ 3.8	+ 5.8	+ 7.8	+10.1	+12.5	+14.9	+17.6	+20.3	+23.2
März 2	0.0	+1.2	+ 2.4	+ 3.7	+ 4.9	+ 6.3	+ 7.8	+ 9.3	+11.0	+12.7	+14.3
12	0.0	+0.5	+ 1.0	+ 1.5	+ 2.0	+ 2.6	+ 3.2	+ 3.8	+ 4.4	+ 5.2	+ 5.8
22	0.0	−0.2	− 0.4	− 0.6	− 0.9	− 1.2	− 1.5	− 1.7	− 2.0	− 2.3	− 2.8
April 1	0.0	−0.9	− 1.8	− 2.7	− 3.9	− 4.9	− 6.1	− 7.3	− 8.5	− 9.9	−11.3
11	0.0	−1.5	− 3.2	− 4.9	− 6.9	− 8.7	−10.7	−12.9	−15.1	−17.5	−20.1
21	0.0	−2.2	− 4.6	− 7.1	− 9.9	−12.6	−15.5	−18.6	−21.9	−25.4	−29.2
Mai 1	0.0	−3.0	− 6.1	− 9.3	−12.9	−16.5	−20.3	−24.4	−28.7	−33.4	−38.4
11	0.0	−3.6	− 7.4	−11.4	−15.8	−20.3	−25.0	−30.2	−35.7	−41.6	−47.9
21	0.0	−4.2	− 8.7	−13.4	−18.5	−23.9	−29.6	−35.8	−42.4	−49.5	−57.4
31	0.0	−4.7	− 9.8	−15.2	−20.8	−27.1	−33.6	−40.7	−48.3	−56.6	−65.8
Juni 10	0.0	−5.1	−10.6	−16.4	−22.6	−29.2	−36.3	−44.2	−52.6	−61.9	−72.3
20	0.0	−5.3	−10.9	−16.9	−23.3	−30.2	−37.5	−45.6	−54.4	−64.0	−75.1
30	0.0	−5.2	−10.7	−16.6	−22.9	−29.6	−36.9	−44.8	−53.4	−62.8	−73.5
Juli 10	0.0	−4.9	−10.1	−15.6	−21.5	−27.8	−34.4	−41.7	−49.6	−58.4	−67.9
20	0.0	−4.4	− 9.1	−14.0	−19.3	−24.8	−30.8	−37.2	−44.2	−51.7	−59.9
30	0.0	−3.8	− 7.9	−12.1	−16.5	−21.3	−26.4	−31.9	−37.7	−43.9	−50.7
Aug. 9	0.0	−3.2	− 6.5	−10.0	−13.7	−17.6	−21.8	−26.2	−30.9	−35.8	−41.2
19	0.0	−2.5	− 5.1	− 7.8	−10.7	−13.7	−17.0	−20.4	−24.1	−27.8	−32.0
29	0.0	−1.8	− 3.7	− 5.7	− 7.7	− 9.9	−12.2	−14.7	−17.3	−20.1	−22.9
Sept. 8	0.0	−1.2	− 2.3	− 3.6	− 4.8	− 6.1	− 7.6	− 9.1	−10.7	−12.5	−14.2
18	0.0	−0.5	− 0.9	− 1.5	− 1.9	− 2.4	− 3.0	− 3.6	− 4.3	− 5.0	− 5.6
28	0.0	+0.2	+ 0.5	+ 0.6	+ 1.0	+ 1.3	+ 1.5	+ 1.8	+ 2.1	+ 2.4	+ 2.8
Okt. 8	0.0	+0.9	+ 1.8	+ 2.8	+ 3.9	+ 5.0	+ 6.1	+ 7.2	+ 8.5	+ 9.8	+11.2
18	0.0	+1.6	+ 3.2	+ 4.9	+ 6.8	+ 8.7	+10.6	+12.7	+15.0	+17.3	+19.9
28	0.0	+2.2	+ 4.6	+ 7.0	+ 9.7	+12.5	+15.3	+18.3	+21.6	+24.9	+28.7
Nov. 7	0.0	+2.9	+ 6.0	+ 9.1	+12.7	+16.2	+20.0	+23.9	+28.2	+32.8	+37.8
17	0.0	+3.6	+ 7.3	+11.2	+15.5	+19.8	+24.5	+29.5	+34.8	+40.4	+46.7
27	0.0	+4.1	+ 8.4	+13.1	+17.9	+23.1	+28.6	+34.5	+40.8	+47.6	+55.1
Dez. 7	0.0	+4.6	+ 9.3	+14.5	+19.8	+25.6	+31.9	+38.4	+45.6	+53.3	+61.7
17	0.0	+4.8	+ 9.8	+15.2	+20.9	+27.0	+33.5	+40.5	+48.2	+56.4	+65.6
27	0.0	+4.8	+ 9.8	+15.2	+20.9	+27.0	+33.5	+40.5	+48.2	+56.4	+65.6
37	0.0	+4.6	+ 9.3	+14.4	+19.8	+25.6	+31.7	+38.2	+45.3	+53.1	+61.5

Reduktionstafel

für den Auf- und Untergang des Mondes

Das Vorzeichen der Tafel gilt für den Aufgang, das entgegengesetzte Vorzeichen für den Untergang.

t*)	Geographische Breite										
	+30°	+32°	+34°	+36°	+38°	+40°	+42°	+44°	+46°	+48°	+50°
h m	m	m	m	m	m	m	m	m	m	m	m
3 20	−94.6	−87.9	−80.9	−73.4	−65.5	−56.9	−47.6	−37.5	−26.4	−14.0	0.0
3 30	−88.5	−82.2	−75.6	−68.5	−61.0	−52.9	−44.2	−34.8	−24.4	−12.9	0.0
3 40	−82.5	−76.5	−70.3	−63.7	−56.6	−49.1	−41.0	−32.2	−22.5	−11.9	0.0
3 50	−76.6	−71.0	−65.2	−59.0	−52.4	−45.3	−37.8	−29.6	−20.7	−10.9	0.0
4 0	−70.8	−65.6	−60.1	−54.4	−48.2	−41.7	−34.7	−27.2	−18.9	− 9.9	0.0
4 10	−65.1	−60.3	−55.2	−49.9	−44.2	−38.2	−31.7	−24.8	−17.3	− 9.0	0.0
4 20	−59.5	−55.0	−50.3	−45.5	−40.3	−34.8	−28.9	−22.5	−15.7	− 8.2	0.0
4 30	−54.0	−49.9	−45.6	−41.2	−36.5	−31.4	−26.1	−20.4	−14.1	− 7.4	0.0
4 40	−48.4	−44.8	−40.9	−36.9	−32.7	−28.2	−23.3	−18.2	−12.6	− 6.6	0.0
4 50	−43.0	−39.8	−36.4	−32.7	−29.0	−24.9	−20.7	−16.1	−11.2	− 5.8	0.0
5 0	−37.7	−34.8	−31.8	−28.6	−25.3	−21.8	−18.1	−14.1	− 9.8	− 5.0	0.0
5 10	−32.4	−29.9	−27.3	−24.6	−21.7	−18.7	−15.5	−12.1	− 8.4	− 4.3	0.0
5 20	−27.1	−25.0	−22.8	−20.6	−18.2	−15.6	−12.9	−10.1	− 7.0	− 3.6	0.0
5 30	−21.9	−20.2	−18.4	−16.6	−14.7	−12.6	−10.4	− 8.1	− 5.6	− 2.9	0.0
5 40	−16.7	−15.4	−14.0	−12.6	−11.2	− 9.6	− 7.9	− 6.2	− 4.3	− 2.2	0.0
5 50	−11.5	−10.6	− 9.7	− 8.7	− 7.7	− 6.6	− 5.5	− 4.2	− 2.9	− 1.5	0.0
6 0	− 6.4	− 5.8	− 5.4	− 4.8	− 4.2	− 3.6	− 3.0	− 2.3	− 1.6	− 0.9	0.0
6 10	− 1.2	− 1.1	− 1.0	− 0.9	− 0.8	− 0.7	− 0.6	− 0.4	− 0.3	− 0.2	0.0
6 20	+ 4.0	+ 3.7	+ 3.4	+ 3.0	+ 2.6	+ 2.3	+ 1.9	+ 1.5	+ 1.0	+ 0.5	0.0
6 30	+ 9.1	+ 8.4	+ 7.7	+ 6.9	+ 6.1	+ 5.3	+ 4.4	+ 3.4	+ 2.4	+ 1.2	0.0
6 40	+14.3	+13.2	+12.0	+10.8	+ 9.6	+ 8.2	+ 6.8	+ 5.3	+ 3.7	+ 1.9	0.0
6 50	+19.5	+18.0	+16.4	+14.8	+13.1	+11.2	+ 9.3	+ 7.2	+ 5.0	+ 2.6	0.0
7 0	+24.7	+22.8	+20.9	+18.8	+16.6	+14.2	+11.8	+ 9.1	+ 6.3	+ 3.3	0.0
7 10	+30.0	+27.7	+25.3	+22.8	+20.1	+17.3	+14.3	+11.1	+ 7.7	+ 4.0	0.0
7 20	+35.3	+32.6	+29.7	+26.8	+23.7	+20.3	+16.8	+13.1	+ 9.1	+ 4.7	0.0
7 30	+40.6	+37.5	+34.3	+30.9	+27.3	+23.4	+19.4	+15.1	+10.5	+ 5.5	0.0
7 40	+45.9	+42.5	+38.9	+35.0	+31.0	+26.6	+22.1	+17.2	+12.0	+ 6.2	0.0
7 50	+51.4	+47.6	+43.5	+39.2	+34.7	+29.9	+24.8	+19.3	+13.5	+ 7.0	0.0
8 0	+56.9	+52.7	+48.2	+43.5	+38.5	+33.2	+27.6	+21.5	+15.0	+ 7.8	0.0
8 10	+62.5	+57.9	+53.0	+47.9	+42.4	+36.6	+30.4	+23.8	+16.6	+ 8.6	0.0
8 20	+68.2	+63.2	+57.9	+52.3	+46.4	+40.1	+33.3	+26.1	+18.2	+ 9.5	0.0
8 30	+74.0	+68.5	+62.9	+56.9	+50.5	+43.7	+36.4	+28.5	+19.8	+10.5	0.0
8 40	+79.8	+74.0	+67.9	+61.5	+54.7	+47.3	+39.5	+30.9	+21.6	+11.4	0.0
8 50	+85.8	+79.6	+73.1	+66.3	+59.0	+51.1	+42.7	+33.5	+23.5	+12.5	0.0
9 0	+91.9	+85.3	+78.4	+71.2	+63.4	+55.0	+46.0	+36.3	+25.5	+13.5	0.0

*) *t* ist beim Aufgange der Zeitunterschied zwischen Aufgang und Kulmination, beim Untergange der Zeitunterschied zwischen Kulmination und Untergang.

Reduktionstafel

für den Auf- und Untergang des Mondes

Das Vorzeichen der Tafel gilt für den Aufgang, das entgegengesetzte Vorzeichen für den Untergang.

t*)	Geographische Breite										
	+50°	+51°	+52°	+53°	+54°	+55°	+56°	+57°	+58°	+59°	+60°
h m	m	m	m	m	m	m	m	m	m	m	m
3 20	0.0	+7.7	+16.1	+25.2	+35.1	+46.1	+58.4	+72.5	+89.1	+109.7	+138.1
3 30	0.0	+7.1	+14.7	+22.9	+31.8	+41.6	+52.4	+64.5	+78.3	+ 94.5	+114.3
3 40	0.0	+6.5	+13.4	+20.9	+28.9	+37.6	+47.2	+57.7	+69.4	+ 82.7	+ 98.2
3 50	0.0	+5.9	+12.2	+19.0	+26.2	+34.0	+42.5	+51.7	+61.9	+ 73.3	+ 86.1
4 0	0.0	+5.4	+11.1	+17.2	+23.7	+30.8	+38.2	+46.3	+55.2	+ 65.0	+ 76.0
4 10	0.0	+4.9	+10.1	+15.6	+21.4	+27.7	+34.4	+41.6	+49.4	+ 57.9	+ 67.3
4 20	0.0	+4.5	+ 9.1	+14.0	+19.2	+24.8	+30.8	+37.2	+44.0	+ 51.5	+ 59.6
4 30	0.0	+4.0	+ 8.1	+12.5	+17.2	+22.2	+27.5	+33.1	+39.1	+ 45.7	+ 52.7
4 40	0.0	+3.5	+ 7.3	+11.2	+15.3	+19.7	+24.3	+29.3	+34.5	+ 40.2	+ 46.3
4 50	0.0	+3.1	+ 6.4	+ 9.8	+13.4	+17.3	+21.4	+25.6	+30.2	+ 35.1	+ 40.4
5 0	0.0	+2.7	+ 5.5	+ 8.5	+11.6	+15.0	+18.5	+22.2	+26.1	+ 30.3	+ 34.8
5 10	0.0	+2.3	+ 4.7	+ 7.2	+10.0	+12.8	+15.7	+18.9	+22.2	+ 25.7	+ 29.5
5 20	0.0	+2.0	+ 3.9	+ 6.0	+ 8.3	+10.7	+13.1	+15.7	+18.4	+ 21.3	+ 24.4
5 30	0.0	+1.6	+ 3.2	+ 4.8	+ 6.7	+ 8.5	+10.5	+12.6	+14.8	+ 17.1	+ 19.6
5 40	0.0	+1.2	+ 2.4	+ 3.7	+ 5.0	+ 6.5	+ 7.9	+ 9.5	+11.2	+ 13.0	+ 14.8
5 50	0.0	+0.8	+ 1.7	+ 2.6	+ 3.4	+ 4.4	+ 5.5	+ 6.5	+ 7.7	+ 8.9	+ 10.2
6 0	0.0	+0.5	+ 0.9	+ 1.4	+ 1.9	+ 2.4	+ 3.0	+ 3.6	+ 4.2	+ 4.9	+ 5.6
6 10	0.0	+0.1	+ 0.2	+ 0.2	+ 0.4	+ 0.5	+ 0.6	+ 0.7	+ 0.8	+ 0.9	+ 1.1
6 20	0.0	−0.3	− 0.6	− 0.9	− 1.2	− 1.5	− 1.9	− 2.3	− 2.6	− 3.0	− 3.5
6 30	0.0	−0.6	− 1.3	− 2.0	− 2.7	− 3.5	− 4.3	− 5.2	− 6.0	− 7.0	− 8.0
6 40	0.0	−1.0	− 2.1	− 3.1	− 4.3	− 5.5	− 6.8	− 8.1	− 9.5	− 11.0	− 12.6
6 50	0.0	−1.3	− 2.9	− 4.3	− 5.9	− 7.5	− 9.4	−11.2	−13.1	− 15.1	− 17.3
7 0	0.0	−1.7	− 3.6	− 5.5	− 7.5	− 9.6	−11.9	−14.3	−16.7	− 19.3	− 22.2
7 10	0.0	−2.1	− 4.4	− 6.7	− 9.2	−11.7	−14.5	−17.4	−20.4	− 23.7	− 27.1
7 20	0.0	−2.5	− 5.1	− 7.9	−10.8	−13.8	−17.1	−20.6	−24.2	− 28.1	− 32.3
7 30	0.0	−2.9	− 6.0	− 9.2	−12.6	−16.1	−19.9	−24.0	−28.2	− 32.8	− 37.7
7 40	0.0	−3.3	− 6.9	−10.6	−14.4	−18.5	−22.9	−27.5	−32.4	− 37.8	− 43.4
7 50	0.0	−3.8	− 7.7	−12.0	−16.3	−21.0	−25.9	−31.3	−36.9	− 43.0	− 49.6
8 0	0.0	−4.2	− 8.7	−13.4	−18.3	−23.7	−29.2	−35.3	−41.7	− 48.7	− 56.3
8 10	0.0	−4.7	− 9.6	−14.9	−20.4	−26.4	−32.6	−39.5	−46.8	− 54.8	− 63.5
8 20	0.0	−5.2	−10.6	−16.4	−22.6	−29.2	−36.3	−44.0	−52.3	− 61.5	− 71.6
8 30	0.0	−5.7	−11.7	−18.1	−25.0	−32.4	−40.4	−49.1	−58.6	− 69.1	− 81.0
8 40	0.0	−6.3	−12.9	−19.9	−27.6	−35.8	−44.9	−54.9	−65.7	− 77.9	− 92.1
8 50	0.0	−6.8	−14.1	−21.9	−30.5	−39.7	−49.8	−61.2	−73.8	− 88.5	−106.1
9 0	0.0	−7.4	−15.4	−24.1	−33.7	−44.1	−55.3	−68.4	−83.6	−101.4	−125.9

*) *t* ist beim Aufgange der Zeitunterschied zwischen Aufgang und Kulmination, beim Untergange der Zeitunterschied zwischen Kulmination und Untergang.

Hilfstafeln

zur Berechnung der optischen Mondlibration

λ−☊	Δλ	a	B	λ−☊	λ−☊	Δλ	a	B	λ−☊
°	′		° ′	°	°	′		° ′	°
0	+0.0+	−0.0269+	−0 0.0+	180	45	+0.6+	−0.0190+	−1 5.3+	225
1	0.0	268	0 1.6	181	46	0.6	187	1 6.4	226
2	0.0	268	0 3.2	182	47	0.6	183	1 7.5	227
3	0.1	268	0 4.8	183	48	0.6	180	1 8.6	228
4	0.1	268	0 6.4	184	49	0.6	176	1 9.7	229
5	+0.1+	−0.0268+	−0 8.0+	185	50	+0.6+	−0.0173+	−1 10.7+	230
6	0.1	267	0 9.7	186	51	0.6	169	1 11.8	231
7	0.1	267	0 11.3	187	52	0.6	165	1 12.8	232
8	0.2	266	0 12.9	188	53	0.6	162	1 13.8	233
9	0.2	265	0 14.4	189	54	0.6	158	1 14.7	234
10	+0.2+	−0.0264+	−0 16.0+	190	55	+0.6+	−0.0154+	−1 15.6+	235
11	0.2	264	0 17.6	191	56	0.6	150	1 16.5	236
12	0.2	263	0 19.2	192	57	0.6	146	1 17.4	237
13	0.3	262	0 20.8	193	58	0.6	142	1 18.3	238
14	0.3	261	0 22.3	194	59	0.5	138	1 19.2	239
15	+0.3+	−0.0259+	−0 23.9+	195	60	+0.5+	−0.0134+	−1 20.0+	240
16	0.3	258	0 25.5	196	61	0.5	130	1 20.8	241
17	0.3	257	0 27.0	197	62	0.5	126	1 21.5	242
18	0.4	255	0 28.5	198	63	0.5	122	1 22.3	243
19	0.4	254	0 30.1	199	64	0.5	118	1 23.0	244
20	+0.4+	−0.0252+	−0 31.6+	200	65	+0.5+	−0.0114+	−1 23.7+	245
21	0.4	251	0 33.1	201	66	0.5	109	1 24.4	246
22	0.4	249	0 34.6	202	67	0.4	105	1 25.0	247
23	0.4	247	0 36.1	203	68	0.4	101	1 25.6	248
24	0.5	245	0 37.6	204	69	0.4	096	1 26.2	249
25	+0.5+	−0.0243+	−0 39.0+	205	70	+0.4+	−0.0092+	−1 26.8+	250
26	0.5	241	0 40.5	206	71	0.4	87	1 27.3	251
27	0.5	239	0 41.9	207	72	0.4	83	1 27.8	252
28	0.5	237	0 43.4	208	73	0.3	79	1 28.3	253
29	0.5	235	0 44.8	209	74	0.3	74	1 28.8	254
30	+0.5+	−0.0233+	−0 46.2+	210	75	+0.3+	−0.0070+	−1 29.2+	255
31	0.5	230	0 47.6	211	76	0.3	65	1 29.6	256
32	0.6	228	0 48.9	212	77	0.3	60	1 30.0	257
33	0.6	225	0 50.3	213	78	0.2	56	1 30.3	258
34	0.6	223	0 51.6	214	79	0.2	51	1 30.6	259
35	+0.6+	−0.0220+	−0 53.0+	215	80	+0.2+	−0.0047+	−1 30.9+	260
36	0.6	217	0 54.3	216	81	0.2	42	1 31.2	261
37	0.6	214	0 55.6	217	82	0.2	37	1 31.4	262
38	0.6	212	0 56.9	218	83	0.1	33	1 31.6	263
39	0.6	209	0 58.1	219	84	0.1	28	1 31.8	264
40	+0.6+	−0.0206+	−0 59.4+	220	85	+0.1+	−0.0023+	−1 32.0+	265
41	0.6	203	1 0.6	221	86	0.1	19	1 32.1	266
42	0.6	200	1 1.8	222	87	0.1	14	1 32.2	267
43	0.6	196	1 3.0	223	88	0.0	09	1 32.3	268
44	0.6	193	1 4.1	224	89	0.0	05	1 32.3	269
45	+0.6+	−0.0190+	−1 5.3+	225	90	+0.0+	−0.0000+	−1 32.3+	270

$$l' = \lambda + \Delta\lambda - a(B - \beta)\, L_{☾}; \quad b' = B - \beta$$

l', b' = Optische Libration der Mondmitte in selenographischer Länge und Breite

λ, β = Länge und Breite des Mondmittelpunktes, berechnet für den Beobachtungsort

$L_{☾}$ = Mittlere Länge des Mondes, ☊ = Mondknoten.

Hilfstafeln

zur Berechnung der optischen Mondlibration

λ−☊	Δλ	*a*	*B*	λ−☊	λ−☊	Δλ	*a*	*B*	λ−☊
°	′		° ′	°	°	′		° ′	°
90	−0.0−	+0.0000−	−1 32.3+	270	135	−0.6−	+0.0190−	−1 5.3+	315
91	0.0	05	1 32.3	271	136	0.6	193	1 4.1	316
92	0.0	09	1 32.3	272	137	0.6	196	1 3.0	317
93	0.1	14	1 32.2	273	138	0.6	200	1 1.8	318
94	0.1	19	1 32.1	274	139	0.6	203	1 0.6	319
95	−0.1−	+0.0023−	−1 32.0+	275	140	−0.6−	+0.0206−	−0 59.4+	320
96	0.1	28	1 31.8	276	141	0.6	209	0 58.1	321
97	0.1	33	1 31.6	277	142	0.6	212	0 56.9	322
98	0.2	37	1 31.4	278	143	0.6	214	0 55.6	323
99	0.2	42	1 31.2	279	144	0.6	217	0 54.3	324
100	−0.2−	+0.0047−	−1 30.9+	280	145	−0.6−	+0.0220−	−0 53.0+	325
101	0.2	51	1 30.6	281	146	0.6	223	0 51.6	326
102	0.2	56	1 30.3	282	147	0.6	225	0 50.3	327
103	0.3	60	1 30.0	283	148	0.6	228	0 48.9	328
104	0.3	65	1 29.6	284	149	0.5	230	0 47.6	329
105	−0.3−	+0.0070−	−1 29.2+	285	150	−0.5−	+0.0233−	−0 46.2+	330
106	0.3	74	1 28.8	286	151	0.5	235	0 44.8	331
107	0.3	79	1 28.3	287	152	0.5	237	0 43.4	332
108	0.4	83	1 27.8	288	153	0.5	239	0 41.9	333
109	0.4	87	1 27.3	289	154	0.5	241	0 40.5	334
110	−0.4−	+0.0092−	−1 26.8+	290	155	−0.5−	+0.0243−	−0 39.0+	335
111	0.4	096	1 26.2	291	156	0.5	245	0 37.6	336
112	0.4	101	1 25.6	292	157	0.4	247	0 36.1	337
113	0.4	105	1 25.0	293	158	0.4	249	0 34.6	338
114	0.5	109	1 24.4	294	159	0.4	251	0 33.1	339
115	−0.5−	+0.0114−	−1 23.7+	295	160	−0.4−	+0.0252−	−0 31.6+	340
116	0.5	118	1 23.0	296	161	0.4	254	0 30.1	341
117	0.5	122	1 22.3	297	162	0.4	255	0 28.5	342
118	0.5	126	1 21.5	298	163	0.3	257	0 27.0	343
119	0.5	130	1 20.8	299	164	0.3	258	0 25.5	344
120	−0.5−	+0.0134−	−1 20.0+	300	165	−0.3−	+0.0259−	−0 23.9+	345
121	0.5	138	1 19.2	301	166	0.3	261	0 22.3	346
122	0.6	142	1 18.3	302	167	0.3	262	0 20.8	347
123	0.6	146	1 17.4	303	168	0.2	263	0 19.2	348
124	0.6	150	1 16.5	304	169	0.2	264	0 17.6	349
125	−0.6−	+0.0154−	−1 15.6+	305	170	−0.2−	+0.0264−	−0 16.0+	350
126	0.6	158	1 14.7	306	171	0.2	265	0 14.4	351
127	0.6	162	1 13.8	307	172	0.2	266	0 12.9	352
128	0.6	165	1 12.8	308	173	0.1	267	0 11.3	353
129	0.6	169	1 11.8	309	174	0.1	267	0 9.7	354
130	−0.6−	+0.0173−	−1 10.7+	310	175	−0.1−	+0.0268−	−0 8.0+	355
131	0.6	176	1 9.7	311	176	0.1	268	0 6.4	356
132	0.6	180	1 8.6	312	177	0.1	268	0 4.8	357
133	0.6	183	1 7.5	313	178	0.0	268	0 3.2	358
134	0.6	187	1 6.4	314	179	0.0	268	0 1.6	359
135	−0.6−	+0.0190−	−1 5.3+	315	180	−0.0−	+0.0269−	−0 0.0+	360

$$l' = \lambda + \Delta\lambda - a\,(B - \beta) - L_{☾}; \quad b' = B - \beta$$

l', b' = Optische Libration der Mondmitte in selenographischer Länge und Breite

λ, β = Länge und Breite des Mondmittelpunktes, berechnet für den Beobachtungsort

$L_{☾}$ = Mittlere Länge des Mondes, ☊ = Mondknoten.

Hilfsgrößen

zur Berechnung der geozentrischen Koordinaten

$\rho \sin \varphi' = s \sin \varphi; \qquad \rho \cos \varphi' = c \cos \varphi$

φ	log s		log c		φ	log s		log c	
°					°				
± 0	9.9970705	4	0.0000000	4	±40	9.9976745	252	0.0006040	252
1	.9970709	14	.0000004	14	41	.9976997	254	.0006292	254
2	.9970723	22	.0000018	22	42	.9977251	255	.0006546	255
3	.9970745	31	.0000040	31	43	.9977506	255	.0006801	255
4	.9970776	40	.0000071	40	44	.9977761	255	.0007056	255
5	9.9970816	49	0.0000111	49	45	9.9978016	256	0.0007311	256
6	.9970865	57	.0000160	57	46	.9978272	255	.0007567	255
7	.9970922	66	.0000217	66	47	.9978527	255	.0007822	255
8	.9970988	74	.0000283	74	48	.9978782	254	.0008077	254
9	.9971062	83	.0000357	83	49	.9979036	252	.0008331	252
10	9.9971145	92	0.0000440	92	50	9.9979288	252	0.0008583	252
11	.9971237	99	.0000532	99	51	.9979540	249	.0008835	249
12	.9971336	108	.0000631	108	52	.9979789	247	.0009084	247
13	.9971444	116	.0000739	116	53	.9980036	245	.0009331	245
14	.9971560	123	.0000855	123	54	.9980281	242	.0009576	242
15	9.9971683	131	0.0000978	131	55	9.9980523	239	0.0009818	239
16	.9971814	139	.0001109	139	56	.9980762	235	.0010057	235
17	.9971953	146	.0001248	146	57	.9980997	232	.0010292	232
18	.9972099	154	.0001394	154	58	.9981229	228	.0010524	228
19	.9972253	160	.0001548	160	59	.9981457	224	.0010752	224
20	9.9972413	168	0.0001708	168	60	9.9981681	220	0.0010976	220
21	.9972581	174	.0001876	174	61	.9981901	215	.0011196	215
22	.9972755	180	.0002050	180	62	.9982116	209	.0011411	209
23	.9972935	187	.0002230	187	63	.9982325	205	.0011620	205
24	.9973122	192	.0002417	192	64	.9982530	199	.0011825	199
25	9.9973314	198	0.0002609	198	65	9.9982729	193	0.0012024	193
26	.9973512	204	.0002807	204	66	.9982922	188	.0012217	188
27	.9973716	209	.0003011	209	67	.9983110	181	.0012405	181
28	.9973925	214	.0003220	214	68	.9983291	175	.0012586	175
29	.9974139	219	.0003434	219	69	.9983466	168	.0012761	168
30	9.9974358	223	0.0003653	223	70	9.9983634	161	0.0012929	161
31	.9974581	227	.0003876	227	71	.9983795	154	.0013090	154
32	.9974808	232	.0004103	232	72	.9983949	147	.0013244	147
33	.9975040	235	.0004335	235	73	.9984096	140	.0013391	140
34	.9975275	238	.0004570	238	74	.9984236	132	.0013531	132
35	9.9975513	241	0.0004808	241	75	9.9984368	124	0.0013663	124
36	.9975754	245	.0005049	245	76	.9984492	117	.0013787	117
37	.9975999	246	.0005294	246	77	.9984609	108	.0013904	108
38	.9976245	249	.0005540	249	78	.9984717	100	.0014012	100
39	.9976494	251	.0005789	251	79	.9984817	92	.0014112	92
40	9.9976745		0.0006040		80	9.9984909		0.0014204	

Name	Seehöhe	Geogr. Breite	Länge von Greenwich + westlich − östlich	Korr. der Sternzeit	Geoz. Breite	Log. ρ incl. Seehöhe
	m	° ′ ″	h m s	s	° ′ ″	
Abbadia	69	+43 22 52.2	+ 0 7 0.1	+ 1.15	+43 11 17.8	9.999317
Åbo	—	+60 26 56.8	− 1 29 6.30	− 14.64	+60 16 58.8	9.998894
Adelaide	41	−34 55 35.1	− 9 14 19.90	− 91.06	−34 44 42.7	9.999526
Albany (Neue Sternw.)[1]	40	+42 39 12.8	+ 4 55 7.12	+ 48.48	+42 27 39.7	9.999334
Algier (Neue Sternw.)[2]	345	+36 48 4.8	− 0 12 8.47	− 1.99	+36 36 58.1	9.999497
Allegheny (Neue Sternw.)	370	+40 28 58.1	+ 5 20 5.39	+ 52.59	+40 17 31.4	9.999411
Allegheny (Alte Sternw.)	349	+40 27 41.6	+ 5 20 2.97	+ 52.58	+40 16 15.0	9.999411
Amherst (Neue Sternw.)	110	+42 21 56.5	+ 4 50 5.98	+ 47.66	+42 10 24.0	9.999346
Amherst (Alte Sternw.)	122	+42 22 17.1	+ 4 50 4.72	+ 47.66	+42 10 44.6	9.999347
Ann Arbor	282	+42 16 48.7	+ 5 34 55.27	+ 55.02	+42 5 16.4	9.999360
Arcetri Zentr. d. Sternw.[3]	184	+43 45 14.4	− 0 45 1.30	− 7.39	+43 33 39.5	9.999316
Arequipa[4]	2451	−16 22 28.0	+ 4 46 11.73	+ 47.02	−16 16 12.7	0.000052
Armagh	64	+54 21 11	+ 0 26 35.48	+ 4.37	+54 10 11.4	9.999041
Athen	110	+37 58 15.5	− 1 34 52.2	− 15.58	+37 47 1.2	9.999456
Bamberg (Remeis-Sternw.)	288	+49 53 6.0	− 0 43 33.57	− 7.15	+49 41 40.0	9.999167
Barcelona[5]	415	+41 24 59.3	− 0 8 30.2	− 1.41	+41 13 29.4	9.999391
Beloit	245	+42 30 8.4	+ 5 56 7.4	+ 58.51	+42 18 35.6	9.999352
Bergedorf Mer.-Kr.	41	+53 28 46.9	− 0 40 57.74	− 6.73	+53 17 40.8	9.999060
Berkeley	94	+37 52 23.5	+ 8 9 2.80	+ 80.34	+37 41 9.8	9.999458
Berlin-Babelsberg[6]	82	+52 24 24.2	− 0 52 25.49	− 8.61	+52 13 11.1	9.999089
Berlin (Urania)[7]	47	+52 31 30.7	− 0 53 27.40	− 8.78	+52 20 18.3	9.999084
Bern	573	+46 57 8.7	− 0 29 45.55	− 4.89	+46 45 34.5	9.999261
Besançon	312	+47 14 59.0	− 0 23 57.1	− 3.93	+47 3 25.3	9.999236
Blaca	280	+43 17 37	− 1 6 8.0	− 10.86	+43 6 3	9.999334
Bloemfontein Filiale d. Detroit Obs.	1490	−29 5 45	− 1 44 57	− 17.24	−28 55 55	9.999758
Bloemfontein Boyden Stat. d. Harv. Obs.	1379	−29 12	− 1 45 57	− 17.40	−29 2	9.999748
Bogota	2640	+ 4 35 55.2	+ 4 56 19.51	+ 48.68	+ 4 34 4.4	0.000111
Bologna Zentr. d. Sternw.	84	+44 29 52.8	− 0 45 24.48	− 7.46	+44 18 17.3	9.999290
Bombay (Colaba)	19	+18 53 36.2	− 4 51 15.60	− 47.85	+18 46 31.1	9.999849
Bonn Zentr. d. Sternw.	62	+50 43 45.0	− 0 28 23.18	− 4.66	+50 32 22.7	9.999130
Bordeaux (Floirac)	73	+44 50 7.2	+ 0 2 6.56	+ 0.35	+44 38 31.6	9.999281
Boston (University)[8]	31	+42 20 58	+ 4 44 19.1	+ 46.71	+42 9 25.6	9.999341
Bothkamp[9]	32	+54 12 9.6	− 0 40 31.2	− 6.65	+54 1 8.8	9.999042
Breslau Zentr. d. Sternw.	147	+51 6 56.5	− 1 8 8.72	− 11.19	+50 55 36.1	9.999126
Breslau Neue Sternw.	117	+51 6 41	− 1 8 21.19	− 11.23	+50 55 20.6	9.999130
Brisbane	51	−27 28 23.0	−10 12 6.48	−100.55	−27 18 54.6	9.999694
Brüssel (Alte Sternw.) Pass. Instr.	56	+50 51 10.7	− 0 17 28.71	− 2.87	+50 39 49.0	9.999126
Brüssel (Uccle) Mer.-Kr.	105	+50 47 54.6	− 0 17 26.05	− 2.86	+50 36 32.7	9.999131

[1]) Dudley Observatory, seit Juni 1893. Alte Sternwarte 37″.0 nördlich, 7ˢ.10 östlich. — [2]) Alte Sternwarte 3′.8 südlich, 8ˢ östlich. — [3]) Seit Oktober 1872, früher in Florenz. — [4]) 1927 geschlossen und nach Bloemfontein verlegt. — [5]) J. Comas Solá. — [6]) Die Koordinaten beziehen sich auf die Mitte der großen Kuppel, in der der große Refraktor aufgestellt ist. Die frühere Sternwarte in Berlin (seit 1835) lag 5′ 52″.5 nördlich und 1ᵐ 9ˢ.31 östlich. — [7]) Übungssternwarte der Universität. — [8]) Die alte Sternwarte lag 4ˢ.1 östlich, 34″.5 nördlich. — [9]) Herr von Bülow.

Koordinaten der Sternwarten

Name	Seehöhe	Geogr. Breite	Länge von Greenwich + westlich − östlich	Korr. der Sternzeit	Geoz. Breite	Log. ρ incl. Seehöhe
	m	° ′ ″	h m s	s	° ′ ″	
Budapest Univ.-Sternw. .	110	+47 29 34.7	−1 16 15.4	−12.53	+47 18 1.5	9.999215
Budapest[1])	110	+47 28 49	−1 16 13.7	−12.53	+47 17 16	9.999215
Bukarest (Mil. Geogr. Inst.)	85	+44 24 34.2	−1 44 27.01	−17.16	+44 12 58.7	9.999292
Cambridge Engl. . .	28	+52 12 51.6	−0 0 22.75	− 0.06	+52 1 37.3	9.999090
Cambridge Mass.[2]) . .	24	+42 22 47.6	+4 44 31.05	+46.74	+42 11 15.1	9.999340
Cap d. gut. Hoffnung	10	−33 56 6.8	−1 13 54.60	−12.14	−33 45 23.2	9.999547
Catania.	47	+37 30 13.3	−1 0 20.6	− 9.91	+37 19 1.9	9.999466
Charkow	139	+50 0 9.9	−2 24 55.72	−23.81	+49 48 44.4	9.999153
Charlottenburg, Techn. Hochsch.	60	+52 30 48.7	−0 53 20.5	− 8.76	+52 19 36.2	9.999085
Charlottesville[3]) . . .	259	+38 2 1.2	+5 14 5.33	+51.60	+37 50 46.5	9.999464
Christiania (Oslo) Mer.-Kr.	25	+59 54 43.7	−0 42 53.51	− 7.04	+59 44 39.2	9.998908
Cincinnati (Alte Sternw.) .	—	+39 6 26.5	+5 37 59.09	+55.52	+38 55 6.0	9.999421
Cincinnati (Neue Sternw.)[4])	247	+39 8 19.8	+5 37 41.40	+55.47	+38 56 59.1	9.999437
Cleveland (Case Obs.) . .	215	+41 30 14.5	+5 26 25.86	+53.63	+41 18 44.3	9.999375
Coimbra	99	+40 12 24.5	+0 33 43.1	+ 5.54	+40 0 58.9	9.999400
Columbia Missouri[5]) .	225	+38 56 12	+6 9 18.37	+60.67	+38 44 52.3	9.999442
Cordoba	434	−31 25 15.5	+4 16 47.16	+42.18	−31 14 57.5	9.999635
Danzig	3	+54 21 18.0	−1 14 39.6	−12.26	+54 10 18.4	9.999036
Denver[6])	1644	+39 40 36.4	+6 59 47.72	+68.96	+39 29 13.1	9.999519
Dorpat (Tartu, Jurjew) Mer.-Kr. .	67	+58 22 47.2	−1 46 53.19	−17.56	+58 12 25.1	9.998946
Dresden (Geodät. Inst.) .	168	+51 1 49.3	−0 54 55.1	− 9.02	+50 50 28.5	9.999130
Dresden (Mathem. Salon) .	—	+51 3 14.7	−0 54 55.83	− 9.02	+50 51 54.0	9.999117
Dublin (Dunsink Obs.) . .	86	+53 23 13.1	+0 25 21.1	+ 4.17	+53 12 6.4	9.999065
Düsseldorf (Bilk) . . .	46	+51 12 25.0	−0 27 2.69	− 4.44	+51 1 5.1	9.999117
Durham	108	+54 46 6.2	+0 6 19.75	+ 1.04	+54 35 9.8	9.999033
Edinburgh	146	+55 55 30	+0 12 44.1	+ 2.09	+55 44 43.5	9.999008
Edinburgh (Blackf. Hill) .	134	+55 55 28.0	+0 12 44.0	+ 2.09	+55 44 41.5	9.999007
Evanston (Dearborn Obs.)	175	+42 3 33.4	+5 50 42.3	+57.61	+41 52 1.6	9.999358
Faenza (Urania Lamonia) .	45	+44 17 2	−0 47 33.9	− 7.81	+44 5 27	9.999293
Flagstaff (Lowell Obs.) .	2210	+35 12 30.5	+7 26 44.6	+73.39	+35 1 35.8	9.999667
Florenz (Alte Sternw.)[7]) .	73	+43 46 4.1	−0 44 59.6	− 7.39	+43 34 29.2	9.999308
Florenz (Mil. Geogr. Inst.)	72	+43 46 49.4	−0 45 2.5	− 7.40	+43 35 14.5	9.999308
Frankfurt a. M. . . .	121	+50 7 0	−0 34 36.3	− 5.70	+49 55 34.6	9.999149
Genf Mer.-Kr.	406	+46 11 59.3	−0 24 36.53	− 4.04	+46 0 24.1	9.999269
Genua (Mar. Sternw.) Mer.-Kr. . .	108	+44 25 8.1	−0 35 41.28	− 5.86	+44 13 32.6	9.999294
Georgetown D. C. . .	62	+38 54 26.2	+5 8 18.33	+50.65	+38 43 6.7	9.999430
Glasgow Schottl. . .	55	+55 52 42.1	+0 17 10.55	+ 2.82	+55 41 55.2	9.999003
Glasgow Missouri . .	228	+39 13 45.6	+6 11 18.06	+61.00	+39 2 24.5	9.999433

[1]) Observ. der Kgl. Josef-Technischen Hochschule. — [2]) Harvard College Observatory. — [3]) Leander Mc. Cormick Observatory, University of Virginia. — [4]) Mount Lookout seit 1873. — [5]) Laws Observatory. — [6]) University Park, Chamberlin Observatory. — [7]) 1872 nach Arcetri verlegt.

Name	Seehöhe	Geogr. Breite	Länge von Greenwich + westlich − östlich	Korr. der Sternzeit	Geoz. Breite	Log. ρ incl. Seehöhe
	m	° ′ ″	h m s	s	° ′ ″	
Göttingen Mer.-Kr.	161	+51 31 48.2	−0 39 46.22	− 6.53	+51 20 30.0	9.999117
Gotha (Neue Sternw.) Zentr. d. St.[1]	322	+50 56 37.9	−0 42 50.51	− 7.04	+50 45 16.7	9.999142
Graz	375	+47 4 37.2	−1 1 47.71	−10.15	+46 53 3.2	9.999244
Greenwich Transit Circle	47	+51 28 38.2	0 0 0.00	0.00	+51 17 19.7	9.999110
Groningen	4	+53 13 13.8	−0 26 15.11	− 4.31	+53 2 6.0	9.999064
Hamburg (Alte Sternw.) Mer.-Kr.[2]	25	+53 33 6.0	−0 39 53.60	− 6.55	+53 22 0.4	9.999057
Hamburg (D. Seewarte)	30	+53 32 51.8	−0 39 53.42	− 6.55	+53 21 46.2	9.999058
Hanover N. H.	183	+43 42 15.3	+4 49 8.00	+47.50	+43 30 40.5	9.999317
Haverford	116	+40 0 40.1	+5 1 12.7	+49.48	+39 49 15.4	9.999406
Heidelberg (Wolfs Sternw.)	126	+49 24 35	−0 34 48.4	− 5.72	+49 13 7	9.999159
Heidelberg (Königst.) Mer.-Kr.	570	+49 23 54.6	−0 34 53.13	− 5.73	+49 12 26.8	9.999198
Helsingfors Mer.-Kr.	33	+60 9 42.3	−1 39 49.10	−16.40	+59 59 40.8	9.998903
Helwan	115	+29 51 31.1	−2 5 21.77	−20.59	+29 41 31.4	9.999648
Hongkong	33	+22 18 13.2	−7 36 41.25	−75.02	+22 10 5.8	9.999793
Hyderabad-Deccan[3]	554	+17 25 54.3	−5 13 48.98	−51.55	+17 19 17.7	9.999907
Innsbruck	605	+47 16 7.7	−0 45 31.42	− 7.48	+47 4 34.0	9.999254
Jena (Univers.) Zentr. d. St.	164	+50 55 35.6	−0 46 20.22	− 7.61	+50 44 14.3	9.999131
Jena (Winkler)	174	+50 56 15.7	−0 46 20.73	− 7.61	+50 44 54.5	9.999132
Johannesburg	1786	−26 10 52.1	−1 52 17.9	−18.45	−26 1 42.0	9.999839
Johannesburg (Fil. d. Yale Observ.)	1741	−26 11 14	−1 52 7	−18.42	−26 2 4	9.999836
Kairo	—	+30 4 38.2	−2 5 8.80	−20.56	+29 54 35.8	9.999635
Kalocsa[4]	102	+46 31 42.4	−1 15 54.34	−12.47	+46 20 7.6	9.999239
Karlsruhe[5]	110	+49 0 29.6	−0 33 35.40	− 5.52	+48 49 0.4	9.999177
Kasan (Univers.)	79	+55 47 24.3	−3 16 29.03	−32.28	+55 36 36.6	9.999007
Kasan (Engelhardt)	98	+55 50 20.5	−3 15 15.74	−32.08	+55 39 33.2	9.999007
Kew	10	+51 28 6	+0 1 15.1	+ 0.21	+51 16 47.5	9.999108
Kiel Neuer Mer.-Kr.	52	+54 20 27.6	−0 40 35.45	− 6.67	+54 9 27.9	9.999040
Kiel Alter Mer.-Kr.	47	+54 20 28.5	−0 40 35.57	− 6.67	+54 9 28.8	9.999040
Kiew Mer.-Kr.	184	+50 27 11.8	−2 2 0.56	−20.04	+50 15 48.3	9.999145
Kodaikanal	2343	+10 13 50	−5 9 52.0	−50.94	+10 9 47.6	0.000114
Königsberg Reps. Mer.-Kr.[6]	22	+54 42 50.6	−1 21 58.98	−13.47	+54 31 53.8	9.999029
Konstanz[7]	420	+47 39 43.6	−0 36 42.01	− 6.03	+47 28 10.7	9.999232
Kopenhagen (Neue Sternw.)[8]	14	+55 41 12.6	−0 50 18.69	− 8.26	+55 30 24.0	9.999005
Kopenhagen (Urania-Sternw.)	10	+55 41 19.2	−0 50 9.11	− 8.24	+55 30 30.6	9.999005
Krakau Mer.-Kr.	221	+50 3 51.9	−1 19 50.28	−13.11	+49 52 26.7	9.999158
Kremsmünster Mer.-Kr.	384	+48 3 23.1	−0 56 31.58	− 9.28	+47 51 51.1	9.999219

[1]) Seit 1857, früher Seeberg. — [2]) 1909 nach Bergedorf verlegt. — [3]) Nizamiah Observatory. — [4]) Erzbischöfl. Haynaldsche Sternwarte. — [5]) 1896 nach Heidelberg verlegt. — [6]) Nach 1898, vor 1898 0s.01 westlich. — [7]) Privatsternwarte von E. Leiner. — [8]) Seit 1861 Nov. 11. Alte Sternwarte 20″.3 südlich, 0s.03 westlich.

Koordinaten der Sternwarten

Name	Seehöhe	Geogr. Breite	Länge von Greenwich + westlich − östlich	Korr. der Sternzeit	Geoz. Breite	Log. ρ incl. Seehöhe
	m	° ′ ″	h m s	s	° ′ ″	
Kyoto (Astron. Inst.) . .	55	+35 1 37.1	−9 3 7.0	−89.22	+34 50 43.9	9.999525
Kyoto (Kwasan Observ.) .	220	+34 59 35	−9 3 10.2	−89.23	+34 48 42	9.999537
Landstuhl (Fauth) . . .	385	+49 24 42.5	−0 30 16.35	− 4.97	+49 13 14.7	9.999185
La Plata Mer.-Kr. Gautier	17	−34 54 30.3	+3 51 43.74	+38.07	−34 43 38.1	9.999525
Leiden (Neue Sternw.)[1] Mer.-Kr. .	6	+52 9 19.8	−0 17 56.15	− 2.94	+51 58 5.2	9.999090
Leipzig (Neue Sternw.)[2] Zentr. .	119	+51 20 5.9	−0 49 33.93	− 8.14	+51 8 46.7	9.999119
Lembang (Bosscha St.) .	1300	− 6 49 29.1	−7 10 27.81	−70.71	− 6 46 45.5	0.000068
Lemberg (Techn. Hochsch.) Pass. Instr.	340	+49 50 11.2	−1 36 3.40	−15.78	+49 38 45.0	9.999171
Leningrad (Petersburg) (Akad.) .	20	+59 56 29.7	−2 1 13.35	−19.91	+59 46 25.5	9.998907
Leningrad (Petersburg) (Univers.) .	4	+59 56 32.0	−2 1 11.3	−19.91	+59 46 27.8	9.998906
Lissabon (Tapada) . . .	94	+38 42 30.5	+0 36 44.68	+ 6.04	+38 31 12.0	9.999437
Lissabon (Mar. Sternw.) .	—	+38 42 17.6	+0 36 33.6	+ 6.01	+38 30 59.2	9.999431
Liverpool (Neue Sternw.)[3]	62	+53 24 4.8	+0 12 17.33	+ 2.02	+53 12 58.2	9.999063
Lourenço Marques . .	60	−25 58 5.5	−2 10 22.63	−21.42	−25 48 58.9	9.999725
Lübeck (Navig.-Sch.) . .	19	+53 51 31.1	−0 42 45.6	− 7.02	+53 40 27.8	9.999049
Lund Zentr. d. Sternw. . .	34	+55 41 51.6	−0 52 44.97	− 8.66	+55 31 3.1	9.999006
Lüttich Ougrée . . .	128	+50 37 6	−0 22 12	− 3.65	+50 25 43	9.999137
Lyon	299	+45 41 40.8	−0 19 8.5	− 3.14	+45 30 5.3	9.999274
Madison (Washburn Observ.)	292	+43 4 36.8	+5 57 37.90	+58.75	+42 53 2.9	9.999340
Madras	7	+13 4 8.0	−5 20 59.65	−52.73	+12 59 2.5	9.999926
Madrid Zentr. d. Sternw. .	656	+40 24 30.1	+0 14 45.09	+ 2.43	+40 13 3.7	9.999433
Mailand, Brera . . .	120	+45 27 59.2	−0 36 45.89	− 6.04	+45 16 23.6	9.999268
Manila	3	+14 35 25	−8 3 50	−79.48	+14 29 47	9.999908
Mannheim Zentr. d. Sternw.	98	+49 29 11.0	−0 33 50.42	− 5.56	+49 17 43.5	9.999164
Marburg	248	+50 48 46.9	−0 35 4.9	− 5.76	+50 37 25.0	9.999141
Mare Island Calif. . .	18	+38 5 55.8	+8 9 5.63	+80.35	+37 54 40.8	9.999447
Markree (Col. Cooper) . .	45	+54 10 31.7	+0 33 48.4	+ 5.56	+53 59 30.7	9.999043
Marseille (Neue Sternw.)[4] Mer.-Kr.	75	+43 18 19.1	−0 21 34.56	− 3.54	+43 6 44.8	9.999320
Melbourne	28	−37 49 53.4	−9 39 54.17	−95.26	−37 38 39.9	9.999454
Merate (Filiale v. Mailand, Brera) .	380	+45 41 54.1	−0 37 42.85	− 6.20	+45 30 18.6	9.999279
Meudon	162	+48 48 18	−0 8 55.5	− 1.46	+48 36 48	9.999185
Mexico	2277	+19 26 1.3	+6 36 26.71	+65.13	+19 18 45.9	9.999995
Middletown, Conn. . .	70	+41 33 18	+4 50 38.2	+47.74	+41 21 47.6	9.999364
Mizusawa	61	+39 8 3.4	−9 24 31.46	−92.74	+38 56 42.7	9.999424
Modena	63	+44 38 52.8	−0 43 42.8	− 7.18	+44 27 17.2	9.999285
Montreal	57	+45 30 20	+4 54 18.63	+48.35	+45 18 44.4	9.999263
Mt. Hamilton (Lick) Mer.-Kr. .	1283	+37 20 25.6	+8 6 34.86	+79.94	+37 9 15.2	9.999552
Mt. Wilson Calif. . .	1742	+34 12 59.5	+7 52 14.33	+77.57	+34 2 13.3	9.999659

[1]) Seit 1860. Alte Sternwarte 8″.0 nördlich, $0^s.42$ östlich. — [2]) Seit 1861. Alte Sternwarte 14″.2 nördlich, $4^s.00$ westlich. — [3]) Alte Sternwarte 44″.0 nördlich, $17^s.1$ östlich. — [4]) Seit 1866. Alte Sternwarte 30″.1 südlich, $6^s.2$ westlich; Seehöhe 29^m.

Name	Seehöhe	Geogr. Breite	Länge von Greenwich + westlich − östlich	Korr. der Sternzeit	Geoz. Breite	Log. ρ incl. Seehöhe
	m	° ′ ″	h m s	s	° ′ ″	
Moskau Mer.-Kr. . . .	142	+55 45 19.5	−2 30 17.03	−24.69	+55 34 31.5	9.999012
Mundenheim[1]) . . .	—	+49 27 30	−0 33 44	− 5.54	+49 16 2	9.999158
München (West-Kuppel) .	529	+48 8 45.5	−0 46 26.02	− 7.63	+47 57 13.8	9.999227
Münster	75	+51 57 45.8	−0 30 29.66	− 5.01	+51 46 30.0	9.999100
Nashville (Vanderbilt Obs.)	174	+36 8 58.2	+5 47 12.81	+57.04	+35 57 56.1	9.999506
Natal	79	−29 50 46.6	−2 4 1.18	−20.37	−29 40 47.0	9.999645
Neapel (Capo di Monte) .	154	+40 51 45.7	−0 57 1.40	− 9.37	+40 40 17.6	9.999387
Neuchâtel Refraktor . .	488	+46 59 49.5	−0 27 49.77	− 4.57	+46 48 15.4	9.999254
New Haven (Neue Stw.) [2])	40	+41 19 22.3	+4 51 40.58	+47.92	+41 7 52.7	9.999368
New York (Rutherfurd) .	—	+40 43 48.5	+4 55 56.66	+48.62	+40 32 20.9	9.999380
New York (Columb. Obs.)	—	+40 45 23.1	+4 55 53.73	+48.61	+40 33 55.4	9.999379
Nikolajew Mer.-Kr. . .	55	+46 58 19.3	−2 7 53.98	−21.01	+46 46 45.1	9.999225
Nizza Kl. Mer.-Kr.[3]) . .	378	+43 43 16.9	−0 29 12.15	− 4.79	+43 31 42.0	9.999330
Northfield (Goodsell Obs.)	290	+44 27 41.4	+6 12 35.94	+61.21	+44 16 5.9	9.999305
Oakland Californ. [4]) .	99	+37 47	+8 8 48	+80.30	+37 35 47	9.999460
Odessa (Univ.-Stw.) Mer.-Kr.	55	+46 28 36.2	−2 3 2.05	−20.21	+46 17 1.3	9.999237
Odessa (Filiale Pulkowa) .	—	+46 28 36.0	−2 3 2.19	−20.21	+46 17 1.1	9.999234
Oslo (Christiania) Mer.-Kr..	25	+59 54 43.7	−0 42 53.51	− 7.04	+59 44 39.2	9.998908
Ottawa Mer.-Kr. . . .	85	+45 23 39.1	+5 2 51.98	+49.75	+45 12 3.5	9.999267
Oxford (Radcl. Obs.) . .	65	+51 45 33.9	+0 5 3.0	+ 0.83	+51 34 17.0	9.999104
Oxford (Univers.) . . .	64	+51 45 34.2	+0 5 0.4	+ 0.82	+51 34 17.3	9.999104
Oxford, Mississippi . .	140	+34 22 12.6	+5 58 7.18	+58.83	+34 11 25.1	9.999546
Padua	38	+45 24 1.2	−0 47 29.15	− 7.80	+45 12 25.6	9.999263
Palermo	72	+38 6 44.0	−0 53 25.87	− 8.78	+37 55 28.9	9.999451
Paris (Obs. nat.) Mer. Cassini	59	+48 50 11.2	−0 9 20.93	− 1.53	+48 38 41.5	9.999177
Paris (Montsouris) westl. Mer.	—	+48 49 18.0	−0 9 20.6	− 1.53	+48 37 48.2	9.999174
Peking	—	+39 54 23.0	−7 45 52.87	−76.53	+39 42 58.7	9.999401
Perth West-Austr. . .	60	−31 57 10.7	−7 43 21.62	−76.12	−31 46 46.9	9.999597
Petersburg (Leningrad) (Akademie) .	20	+59 56 29.7	−2 1 13.35	−19.91	+59 46 25.5	9.998907
Petersburg (Leningrad) (Univers.) .	4	+59 56 32.0	−2 1 11.3	−19.91	+59 46 27.8	9.998906
Philadelphia[5])	74	+39 58 2.1	+5 1 6.88	+49.47	+39 46 37.5	9.999404
Plonsk[6])	—	+52 37 40.0	−1 21 31.9	−13.39	+52 26 28.2	9.999078
Pola	32	+44 51 48.6	−0 55 23.07	− 9.10	+44 40 12.9	9.999277
Porto Alegre[7]) Mer.-Kr..	—	−30 1 51	+3 24 53.2	+33.66	−29 51 49	9.999636
Portsmouth	—	+50 48 3	+0 4 24.8	+ 0.73	+50 36 41	9.999124
Posen	85	+52 23 48.6	−1 7 30.60	−11.09	+52 12 35.4	9.999090

[1]) Dr. Max Mündler. — [2]) Yale University. Alte Sternwarte 45″.8 südlich, $1^s.58$ westlich. — [3]) Herr R. Bischofsheim. — [4]) Chabot Observatory. — [5]) Flower Obs. (Univ. of Pennsylvania). — [6]) Dr. Jedrzejewicz; 1898 nach Warschau verlegt. — [7]) Observatorio Regional do Rio Grande do Sul.

Koordinaten der Sternwarten

Name	Seehöhe	Geogr. Breite	Länge von Greenwich + westlich − östlich	Korr. der Sternzeit	Geoz. Breite	Log. ρ incl. Seehöhe
	m	° ′ ″	h m s	s	° ′ ″	
Potsdam (Astrophys. Obs.).	97	+52 22 56.0	− 0 52 15.86	− 8.58	+52 11 42.7	9.999091
Potsdam (Geod. Inst.) Turm	99	+52 22 54.8	− 0 52 16.11	− 8.58	+52 11 41.5	9.999091
Poughkeepsie[1] . . .	61	+41 41 18	+ 4 55 33.6	+48.56	+41 29 47	9.999360
Prag (Univ.-Stw.) Turm . .	197	+50 5 16.0	− 0 57 40.29	− 9.47	+49 53 50.9	9.999155
Prag (Safarik)	—	+50 4 24	− 0 57 48	− 9.49	+49 52 59	9.999142
Princeton N. J. (N. Stw.)[2]	75	+40 20 55.8	+ 4 58 39.44	+49.06	+40 9 29.7	9.999395
Providence[3]	171	+41 49 46.4	+ 4 45 37.64	+46.92	+41 38 15.2	9.999363
Pulkowa Zentr. d. Stw. .	75	+59 46 18.5	− 2 1 18.57	−19.93	+59 36 12.3	9.998914
Quebec Canada . . .	90	+46 47 59.2	+ 4 44 52.71	+46.80	+46 36 24.8	9.999231
Quito	2846	− 0 14 0	+ 5 13 58.20	+51.58	− 0 13 54	0.000194
Riga (Polytechnikum) Turm	—	+56 57 7	− 1 36 28.11	−15.84	+56 46 30	9.998974
Rio de Janeiro. . . .	63	−22 54 23.7	+ 2 52 41.52	+28.37	−22 46 6.0	9.999784
Rio de Janeiro (N. Stw.)	33	−22 53 41	+ 2 52 53.5	+28.40	−22 45 24	9.999782
Rom (Coll. Rom.) Mer.-Kr.	59	+41 53 53.6	− 0 49 55.36	− 8.19	+41 42 22.3	9.999354
Rom (Capitol) Mer.-Kr. . .	65	+41 53 33.2	− 0 49 56.34	− 8.20	+41 42 1.9	9.999355
Rom (Vatican) Mer.-Kr. .	100	+41 54 12.4	− 0 49 48.26	− 8.18	+41 42 41.1	9.999357
Rousdon	157	+50 42 38	+ 0 11 58.9	+ 1.96	+50 31 16	9.999137
Rugby	119	+52 22 30	+ 0 5 2.0	+ 0.83	+52 11 16.7	9.999093
St. Louis Missouri . .	—	+38 38 3.6	+ 6 0 49.15	+59.28	+38 26 45.5	9.999433
San Fernando	30	+36 27 42.0	+ 0 24 49.30	+ 4.08	+36 16 37.7	9.999488
San Francisco[4] . . .	—	+37 47 28.0	+ 8 9 42.81	+80.45	+37 36 14.8	9.999453
Santiago de Chile (N. St.)	580	−33 33 44.2	+ 4 42 46.0	+46.44	−33 23 4.1	9.999595
Santiago de Chile (A. St.)	619	−33 26 25.4	+ 4 42 36.9	+46.42	−33 15 46.4	9.999600
Sétif	1120	+36 11 10	− 0 21 38.6	− 3.55	+36 0 7.7	9.999569
Simeïs	360	+44 24 11.1	− 2 15 58.1	−22.34	+44 12 35.6	9.999312
Sonneberg (Hoffmeister) .	405	+50 21 29.5	− 0 44 42.87	− 7.34	+50 10 5.5	9.999163
Sonneberg (Erbisbühl). .	640	+50 22 41.4	− 0 44 46.19	− 7.36	+50 11 17.5	9.999178
South Hadley	76	+42 15 18.2	+ 4 50 19	+47.69	+42 3 45.9	9.999346
Stará Dala[5]	113	+47 52 27.3	− 1 12 45.49	−11.95	+47 40 54.9	9.999206
Stockholm Mer.-Kreis .	44	+59 20 32.7	− 1 12 13.97	−11.86	+59 10 21.4	9.998922
Stonyhurst	116	+53 50 40.0	+ 0 9 52.7	+ 1.62	+53 39 36.5	9.999056
Straßburg (N. St.). M.-Kr.[6]	144	+48 35 0.4	− 0 31 4.53	− 5.10	+48 23 29.9	9.999190
Sydney	44	−33 51 41.1	−10 4 49.54	−99.36	−33 40 58.2	9.999551
Tacubaya[7]	2311	+19 24 17.9	+ 6 36 46.71	+65.18	+19 17 3.0	9.999997
Tartu (Dorpat, Jurjew) Mer.-Kr.	67	+58 22 47.2	− 1 46 53.19	−17.56	+58 12 25.1	9.998946
Taschkent	479	+41 19 36.7	− 4 37 10.57	−45.53	+41 8 7.1	9.999398

[1]) Vassar College. — [2]) Alte Sternwarte 2″.0 nördlich, $1^s.94$ östlich; 65^m. — [3]) Seagrave. Ladd Observatory 35″ nördlich, $1^s.57$ östlich. — [4]) Davidson Observatory. — [5]) Früher O-Gyalla. — [6]) Seit Anfang 1881. — [7]) Seit März 1883, früher in Chapultepec.

Name	Seehöhe	Geogr. Breite	Länge von Greenwich + westlich — östlich	Korr. der Sternzeit	Geoz. Breite	Log. ρ incl. Seehöhe
	m	° ′ ″	h m s	s	° ′ ″	
Teramo (Cerulli)	398	+42 39 27	— 0 54 55.8	— 9.02	+42 27 54	9.999358
Tokio	59	+35 40 21.4	— 9 18 10.09	— 91.69	+35 29 23.0	9.999509
Toronto	116	+43 40 1.3	+ 5 17 34.67	+ 52.17	+43 28 26.5	9.999313
Tortosa (Ebro-Stw.) M.-Kr.	54	+40 49 14	— 0 1 58	— 0.32	+40 37 46	9.999382
Toulouse Mer.-Kr. . . .	195	+43 36 44.0	— 0 5 51.2	— 0.96	+43 25 9.3	9.999320
Triest	23	+45 38 45.4	— 0 55 2.90	— 9.04	+45 27 9.9	9.999256
Tsingtau (Met.-astr. Stat.).	—	+36 4 11.3	— 8 1 16.21	— 79.06	+35 53 9.8	9.999496
Tucson Arizona (Steward Obs.) .	757	+32 13 59.4	+ 7 23 47.68	+ 72.90	+32 3 32.6	9.999638
Turin Mer.-Kr.	276	+45 4 7.9	— 0 30 47.15	— 5.06	+44 52 32.2	9.999288
Turin (Pino Torinese) .	618	+45 2 16.3	— 0 31 5.95	— 5.11	+44 50 40.6	9.999312
Upsala (N. Stw.) Pass.-Instr.	21	+59 51 29.4	— 1 10 30.13	— 11.58	+59 41 24.2	9.998909
Urbana Jll.	236	+40 6 20.2	+ 5 52 53.90	+ 57.97	+39 54 55.1	9.999412
Utrecht.	12	+52 5 9.5	— 0 20 31.6	— 3.37	+51 53 54.4	9.999093
Valkenburg (Ignatius Coll.)	100	+50 52 29.3	— 0 23 19.91	— 3.83	+50 41 7.8	9.999129
Venedig	15	+45 26 10.5	— 0 49 22.12	— 8.11	+45 14 34.9	9.999261
Victoria B.C. (Dominion Obs.)	229	+48 31 15.7	+ 8 13 40.17	+ 81.18	+48 19 45.0	9.999197
Warschau[1]) Zentr. d. Stw.	121	+52 13 4.6	— 1 24 7.25	— 13.82	+52 1 50.3	9.999097
Warschau[2])	—	+52 13 10	— 1 24 4.8	— 13.81	+52 1 56	9.999088
Warschau (Techn.Hochsch.)	144	+52 13 21.0	— 1 24 2.4	— 13.81	+52 2 6.8	9.999098
Washington (Alte Stw.) .	31	+38 53 38.9	+ 5 8 12.13	+ 50.63	+38 42 19.4	9.999428
Washington (Neue Stw.).	82	+38 55 14.0	+ 5 8 15.78	+ 50.64	+38 43 54.4	9.999431
Washington (Kath. Univ.)	—	+38 56 14.8	+ 5 8 0.0	+ 50.60	+38 44 55.1	9.999425
Wellington Transit Instr.[3])	127	—41 17 3.8	—11 39 4.27	—114.84	—41 5 34.3	9.999375
West Point N. Y. (N.Stw.)[4])	170	+41 23 22.1	+ 4 55 50.6	+ 48.60	+41 11 52.3	9.999375
Wien (Alte Sternw.) . . .	167	+48 12 35.5	— 1 5 31.61	— 10.76	+48 1 3.9	9.999201
Wien (Josephstadt)[5]). . .	214	+48 12 53.8	— 1 5 25.17	— 10.74	+48 1 22.2	9.999204
Wien (Neue Sternw.) Zentr.	240	+48 13 55.3	— 1 5 21.35	— 10.73	+48 2 23.8	9.999205
Wien (Ottakring)[6]) . . .	285	+48 12 46.7	— 1 5 10.97	— 10.71	+48 1 15.1	9.999209
Wien (Mil. Geogr. Inst.) .	211	+48 12 40.5	— 1 5 26.24	— 10.75	+48 1 8.9	9.999203
Wien (Techn. Hochschule) .	198	+48 11 58.3	— 1 5 29.76	— 10.76	+48 0 26.7	9.999204
Wilhelmshaven Mer.-Kr.	9	+53 31 52.1	— 0 32 35.15	— 5.35	+53 20 46.4	9.999057
Williams-Bay Wisc.[7]) .	334	+42 34 12.6	+ 5 54 13.24	+ 58.19	+42 22 39.6	9.999356
Williamstown Mass. .	213	+42 42 49	+ 4 52 53.5	+ 48.12	+42 31 16	9.999344
Wilna Pass.-Instr. . . .	122	+54 40 59.1	— 1 41 8.76	— 16.61	+54 30 2.1	9.999036
Windsor N. S. W.[8]) . .	16	—33 36 30.8	—10 3 20.77	— 99.11	—33 25 50.2	9.999556
Wolfersdorf	279	+50 47 20.0	— 0 46 50.94	— 7.70	+50 35 58.0	9.999143
Zô-sè China	100	+31 5 47.6	— 8 4 44.75	— 79.63	+30 55 33.2	9.999619
Zürich Meridian-Kreis . .	468	+47 22 38.3	— 0 34 12.3	— 5.62	+47 11 4.8	9.999242

[1]) Universitäts-Sternwarte. — [2]) Dr. Jedrzejewicz; seit 1898, früher in Plonsk. — [3]) Dominion Observatory. — [4]) Seit 1883. Alte Sternwarte 9″ nördlich, 1s.2 östlich. — [5]) von Oppolzers Sternwarte. — [6]) v. Kuffner. — [7]) Yerkes Observatory. — [8]) J. Tebbutt. Neue Sternwarte, 0″.4 südlich von der alten.

Normalzeiten der wichtigeren Länder

a) An den Meridian von Greenwich angeschlossen

Normalzeit = Mittl. Ortszeit des Meridians	Bezeichnung	Staaten
östl. Gr. h m		
11 30	—	Neu Seeland
10 0	Ostaustralische Z.	Victoria, Neu Süd-Wales, Queensland, Tasmanien
9 30	—	Süd-Australien
9 0	—	Japan, Korea
8 0	Ostchinesische Küsten-Z.	Ostküste von China, West-Australien
7 0	Südchinesische Küsten-Z.	Südküste von China, Franz. Indochina
5 30	—	Indien, Ceylon
3 0	—	Europ. Rußland östl. von etwa 40° östl. Länge
2 30	—	Deutsch Ostafrika
2 0	Osteuropäische Z.	Finnland, Estland, Lettland, Europ. Rußland westl. von etwa 40° östl. Länge, Bulgarien, Rumänien, Griechenland, Türkei, Palästina, Ägypten, Süd-Afrika
1 0	Mitteleuropäische Z. (M. E. Z.)	Norwegen, Schweden, Dänemark, Deutschland, Österreich, Ungarn, Schweiz, Italien, Polen, Tchechoslovakei, Jugoslavien, Kamerun, Deutsch Südwest-Afrika
h m 0 0	Westeuropäische Z. (Greenwich Z.)	Belgien, Frankreich, Großbritannien und Irland, Luxemburg, Portugal, Spanien, Gibraltar, Algerien
westl. Gr. h m		
3 0	—	Ost-Brasilien
4 0	Atlantic St. Time	Mittel-Brasilien, Argentinien, Uruguay, Canada (Küste)
4 30	—	Venezuela
5 0	Eastern St. Time	Canada (Quebec, Ontario bis 82° 30′ westl.), Vereinigte Staaten (Ost-Zone), Chile, Panama, Peru, West-Brasilien
6 0	Central St. Time	Zentral-Zone von Canada und von den Vereinigten Staaten, Ostmexico
7 0	Mountain St. Time	Gebirgszone von Canada und von den Vereinigten Staaten, Westmexico
8 0	Pacific St. Time	Vereinigte Staaten (Pacifische Küste), Britisch Columbien
10 30	—	Sandwich Inseln

b) Nicht an den Meridian von Greenwich angeschlossen

Staaten	Meridian	Längendifferenz gegen Greenwich
		h m s
Columbien	Bogota	4 56 52.4 W.
Ecuador	Quito	5 14 6.7 W.
Niederlande	Amsterdam	0 19 32.1 O.

Besondere Erläuterungen zu den Angaben und zum Gebrauch des Jahrbuchs.

Das Jahrbuch gibt die Örter der *Wandelsterne* in geozentrischen und in heliozentrischen Koordinaten. Die Zeitpunkte, für die sie gelten, sind in Welt-Zeit ausgedrückt, wenn nicht ausdrücklich eine andere Zeit angegeben wird. **Welt-Zeit ist identisch mit Bürgerlicher Zeit Greenwich.** Der bürgerliche Tag beginnt um Mitternacht, die Welt-Zeit-Stunden sind von 0^h bis 24^h durchgezählt. Die Beziehung zu der bis zum Jahrgang 1924 (einschließlich) im Jahrbuch verwendeten Mittleren Zeit Greenwich besteht darin, daß der astronomische mittlere Tag erst am Mittag des bürgerlichen Tages, also 12^h nach dessen Anfang beginnt. Somit ist 1925 Jan. 1, 0^h Welt-Zeit gleich 1924 Dez. 31, 12^h Mittlere Zeit Greenwich.

Die Örter der *Fixsterne* sind gegeben als »Mittlere Sternörter«, bezogen auf das mittlere Äquinoktium des Jahresanfangs, und in Ephemeridenform als »Scheinbare Sternörter«, bezogen auf das instantane wahre Äquinoktium.

Zur Erläuterung ist im einzelnen folgendes zu bemerken:

Sonnenephemeride (S. 2—29 und 100—108).

Der erste Teil der Sonnenephemeride (S. 2—19) gibt auf den linken Seiten für 0^h Welt-Zeit an jedem Tage:

1) Die Zeitgleichung = Mittlere Zeit *minus* Wahre Zeit.

2) Die geozentrischen, äquatorialen Koordinaten α, δ des scheinbaren Sonnenorts, bezogen auf das jedesmalige wahre Äquinoktium, zugleich mit der ersten Differenzenreihe. Diese Angaben sind direkt mit den Beobachtungen vergleichbar. Die Nutationsglieder kurzer Periode sind, wie im Vorwort erwähnt, in den Koordinaten nicht enthalten.

3) Die halbe Durchgangsdauer (in Sternzeit) der Sonnenscheibe durch den Meridian.

4) Den geozentrischen Halbmesser der Sonnenscheibe, d. i. der Winkel, unter dem der Sonnenhalbmesser vom Erdmittelpunkt aus erscheint.

Die rechten Seiten geben:

1) Die Julianische Zeit, d. i. die Anzahl der seit Beginn der Julianischen Periode verflossenen mittleren Sonnentage.

2) Die Sternzeit für 0^h Welt-Zeit. In ihr sind, wie im Vorwort erwähnt, nur die langperiodischen Glieder der Nutation enthalten.

Um für einen anderen Erdort der westlichen Längendifferenz $\Delta\lambda$ (in Stunden) gegen Greenwich die Sternzeit in seiner mittleren Mitternacht zu erhalten, ist zu diesen Angaben hinzuzulegen: $9^s.8565\,\Delta\lambda$. Diese Werte finden sich unter der Überschrift: »Korr. der Sternzeit« im Verzeichnis der Sternwarten.

3) Die Nutation in Rektaszension getrennt nach langperiodischen und kurzperiodischen Gliedern.

4) Die geozentrischen ekliptikalen Koordinaten λ, β der Sonne, bezogen auf das mittlere Äquinoktium des Jahresanfangs, sowie log R, den Logarithmus der Entfernung R der Erde von der Sonne. Diese Angaben finden bei Bahnberechnungen u. dergl. Verwendung.

5) Die bürgerlichen Ortszeiten des Aufgangs und Untergangs der Sonne für einen Ort des Nullmeridians in $+50^\circ$ Breite; sie sind mit der Horizontalrefraktion $34'$ berechnet und gelten für den oberen Rand der Sonne. Um daraus für einen beliebigen anderen Ort zwischen $+30^\circ$ und $+60^\circ$ geographischer Breite die entsprechenden Angaben zu erhalten, ist die Tabelle S. 346*, 347* zu benutzen.

Auf S. 20—28 folgen, bezogen auf das mittlere Äquinoktium des Jahresanfangs, die rechtwinkligen, geozentrischen, äquatorialen Sonnenkoordinaten für 0^h Welt-Zeit mit ihren ersten und zweiten Differenzen. Die gleichen Koordinaten, jedoch bezogen auf das Normaläquinoktium 1925.0, werden auf S. 100—108 gegeben.

Die Werte von X, Y, Z sind auf 6 Dezimalen gegeben. Die Ephemeriden bieten jedoch die Möglichkeit, die Sonnenkoordinaten auch auf 7 Dezimalen zu entnehmen. Zu diesem Zwecke füge man an die 6-stelligen Werte eine Null an und vereinige sie algebraisch mit den Werten von ΔX, ΔY, ΔZ. So sind z. B. die 7-stelligen Werte von X, Y und Z für 1933 Jan. 11, 0^h Welt-Zeit

X + 0.341 7600	Y − 0.845 9780	Z − 0.366 9280
ΔX + 3	ΔY − 3	ΔZ + 3
$X + \Delta X$ + 0.341 7603	$Y + \Delta Y$ − 0.845 9783	$Z + \Delta Z$ − 0.366 9277

Die gleichen Vorschriften gelten für die auf das Normaläquinoktium 1925.0 bezogenen Sonnenkoordinaten auf S. 100—108.

Am Fuß der Seite 28 finden sich die Zeiten für die Anfänge der Jahreszeiten und für die Erdnähe und Erdferne der Sonne.

Die Seite 29 enthält die Aberration, Parallaxe, mittlere Länge $L_\odot$ und mittlere Anomalie $M_\odot$ der Sonne im Intervall von je 10 Tagen.

Mondephemeride (S. 30—48).

Die Mondephemeride (S. 30—47) gibt auf den linken Seiten für 0^h Welt-Zeit:

1) Die scheinbare Rektaszension und Deklination des Mondmittelpunktes mit den ersten Differenzen.

2) Die Äquatorial-Horizontalparallaxe $p_{☾}$ des Mondes.

3) Den geozentrischen Mondhalbmesser $r_{☾}$, d. i. der Winkel, unter dem der Mondhalbmesser vom Erdmittelpunkt aus erscheint.

4) Die Länge und Breite des Mondes, abgekürzt auf 0°.001.

Die rechten Seiten enthalten:

1) Für den oberen Durchgang des Mondes durch den Meridian von Greenwich die genäherten Angaben für die Rektaszension, Deklination und Parallaxe des Mondmittelpunktes, sowie die bürgerliche Greenwicher Zeit dieses Durchgangs, nebst den Änderungen für 1^h westlicher Längendifferenz.

2) Die bürgerlichen Ortszeiten des Aufgangs und Untergangs des Mondes für einen Ort des Nullmeridians in + 50° Breite nebst Änderung für 1^h westlicher Längendifferenz; sie sind mit der Horizontalrefraktion 34′ berechnet und gelten für den oberen Rand des Mondes. Um daraus für einen beliebigen anderen Ort zwischen +30° und +60° geographischer Breite die entsprechenden Angaben zu erhalten, ist die Tabelle S. 348*, 349* zu benutzen.

Seite 48 enthält die Zeitangaben für die Phasen und die Erdnähe und Erdferne des Mondes.

Ephemeriden der Großen Planeten (S. 49—99 und 109—112).

Die geozentrischen Örter der Planeten sind für Merkur, Venus, Mars, Jupiter, Saturn von Tag zu Tag, für Uranus und Neptun von 4 zu 4 Tagen für 0^h Welt-Zeit mit ihren ersten Differenzen gegeben, und zwar in scheinbaren, auf das momentane wahre Äquinoktium bezogenen Koordinaten. Die letzte Spalte gibt die bürgerliche Zeit (Greenwich) der oberen Kulmination in Greenwich.

Für die Reduktion und die Vergleichung der Planetenbeobachtungen mit der Ephemeride ist die Kenntnis der scheinbaren Halbmesser erforderlich. Man kann für dieselben in der Einheit der Entfernung annehmen:

für Merkur Halbmesser		. . . . .	3.34″		
» Venus	»	. . . . .	8.78		
» Mars	»	. . . . .	4.68		
» Jupiter	»	(Äquatorial)	99.8,	(Polar)	92.6″
» Saturn	»	(Äquatorial)	81.4,	(Polar)	73.4
» Uranus	»	. . . . .	34.7		
» Neptun	»	. . . . .	45		

Die heliozentrischen Ephemeriden der Planeten (S. 109—112) geben den Log. des Radiusvector, die Länge, deren Reduktion auf die Bahn und die Breite bezogen auf das mittlere Äquinoktium 1925.0.

☊ und i stellen die Bahnlage für die Epoche 1925.0 und das Normaläquinoktium 1925.0 dar.

Die Genauigkeit und Ausführlichkeit dieser heliozentrischen Angaben sind ihrem Hauptzweck, zur Berechnung der speziellen Störungen zu dienen, angepaßt.

Die beigefügten Werte der Planetenmassen sind die den Tafeln von Newcomb und von Hill zugrunde liegenden. Für die Erde ist noch besonders zu erwähnen, daß die Masse von »Erde + Mond« gegeben ist, Radiusvector und heliozentrische Länge sich auf den Schwerpunkt des Systems »Erde + Mond« beziehen.

Mittlere Örter von 925 Fixsternen (S. 2*—25*).

Die mittleren Örter der 925 Fixsterne sind aus den Daten der Veröffentlichung Nr. 33 des *Königlichen Astronomischen Rechen-Instituts* mit den daselbst angegebenen Hilfsgrößen für Präzession und Eigenbewegung abgeleitet worden. Nur die mittleren Örter der 20 Polsterne sind durch numerische Integration berechnet.

Ein * vor dem Namen weist auf eine Anmerkung am Fuß der Seite hin.

Unter Gr. stehen die visuellen Größen, welche aus der »Revised Harvard Photometry« in »Harvard Annals, vol. 50« entnommen sind, sofern nichts Anderes bemerkt ist. Wo für einen Stern zwei Größen gegeben sind, beziehen sich diese auf die Komponenten eines Doppelsterns. Die in den Anmerkungen gegebenen Größen für Doppelsternkomponenten und für die Extrema der Veränderlichen sind dem »Henry Draper Catalogue« entnommen.

Die Spektren sind aus dem Draper Katalog übernommen worden. Zusammengesetzte Spektren sind durch + gekennzeichnet. In anderen Fällen beziehen sich, wo 2 Spektren gegeben sind, diese auf die Komponenten eines Doppelsterns.

Scheinbare Örter von 579 Fixsternen (S. 26*—235*).

Die scheinbaren Rektaszensionen und Deklinationen der Fixsterne sind für den Moment der oberen Kulmination im Meridian von Greenwich gegeben.

Die Ephemeriden der 555 Sterne mit Deklinationen kleiner als 80°, deren scheinbare Örter von 10 zu 10 Sterntagen gegeben sind, enthalten die kurzperiodischen Mondglieder der Nutation nicht. Das Datum des Tages, an welchem zwei Kulminationen stattfinden, ist in kleinem Druck vor der Rektaszensionsspalte angeführt.

Die jährliche Parallaxe ist bei folgenden Sternen berücksichtigt, bei denen sie $0''.20$ übersteigt und hinreichend verbürgt erscheint, nämlich:

Nr. 59 τ Ceti	mit $0''.31$	Nr. 538 α Centauri	mit $0''.75$
Nr. 127 ε Eridani	» 0.32	Nr. 745 α Aquilae	» 0.23
Nr. 257 α Can. maj.	» 0.38	Nr. 793 61 Cygni	» 0.30
Nr. 291 α Can. min.	» 0.33		

Von den im B. J. nicht mit Ephemeriden versehenen Sternen des N. F. K. besitzt noch Nr. 825, ε Indi, eine Parallaxe von 0″.25.

Die Ephemeriden der auf S. 2*—24* eingeklammerten Sterne findet man im Almanaque Nautico.

Es folgen die scheinbaren Örter von 20 Polsternen für jede obere Kulmination. Sie enthalten die kurzperiodischen Mondglieder nicht, jedoch sind deren Werte in besonderen Spalten gegeben.

Am Fuße der Ephemeriden ist der mittlere Ort eines jeden Sternes für den Anfang des Jahres und die Werte von sec δ und tg δ angegeben, welche bei der Reduktion der Meridianbeobachtungen nach der hierfür am zweckmäßigsten erscheinenden Besselschen Formel gebraucht werden. Ferner sind hier die Größen a, b, a', b' enthalten, mit deren Hilfe die Nutationsglieder kurzer Periode leicht berechnet werden können. Man erhält $A'a + B'b$ in Zeitsekunden, $A'a' + B'b'$ in Bogensekunden.

Auf den Seiten 226*—235* sind die scheinbaren, rechtwinkligen Koordinaten von vier polnahen Sternen gegeben. Sie beziehen sich auf ein Koordinatensystem, dessen positive x-Achse nach dem Frühlingspunkt und dessen positive y-Achse nach dem Punkt $\alpha = 6^h$, $\delta = 0^\circ$ gerichtet ist. Der Zusammenhang zwischen x, y und α, δ ist gegeben durch die Beziehungen: $x = \cos\delta\cos\alpha$, $y = \cos\delta\sin\alpha$. Die Angaben gelten für 12^h Sternzeit Greenwich und enthalten die kurzperiodischen Mondglieder der Nutation nicht, deren Werte jedoch in der letzten Spalte einer jeden Seite unter der Überschrift »Kurzperiod. Mondgl.« gegeben sind.

Als Quellen für die Koordinaten und Eigenbewegungen dieser vier Sterne sind benutzt worden:

für B D + 89° 1: L. Courvoisier: Beobachtungen des Sterns BD 89° 1 am großen Meridiankreis der Berliner Sternwarte. Astron. Nachr. Bd. **200**, 243,

für B D + 89° 3: L. Courvoisier: Ephemeriden der Polsterne BD 89° 3 und BD 89° 37 für 1923. Astron. Nachr. Bd. **217**, 319,

für B D + 89° 37: L. Courvoisier: Neue Position und Eigenbewegung des Polsterns B D + 89° 37. Astron. Nachr. Bd. **230**, 71,

für CPD — 89° 38: Cape Annals Bd. **XI**, II, 244 für den Ort und eine briefliche Mitteilung für die Eigenbewegung.

Mit den an diesen Stellen gegebenen Werten findet man folgende mittleren Örter für 1933.0:

Name	Gr.	x	Jährliche Veränd. 1933.5	Jährliche Eigenbew.	y	Jährliche Veränd. 1933.5	Jährliche Eigenbew.
	M	″	″	″	″	″	″
B D+89° 1	10.56	—139.29	—20.086	—0.024	+ 79.22	—0.041	—0.008
B D+89° 3	9.06	+ 61.50	—20.240	—0.003	+863.61	+0.006	—0.006
B D+89° 37	10.06	—921.73	—19.978	—0.011	—343.78	—0.193	+0.015
C P D—89° 38	9.5	—167.19	+20.140	+0.027	—307.49	—0.004	+0.031

Reduktionsgrößen (S. 236*—276*).

Auf die scheinbaren Örter der Sterne folgt S. 236* eine Zusammenstellung der Werte, mit welchen die Reduktionsgrößen der darauf folgenden Tafeln berechnet sind, und der Formeln für die Reduktion auf den scheinbaren Ort.

Die Größen zur »Reduktion auf den scheinbaren Ort« sind in ihrer *ersten* Form: A, B, C, D, E; A', B' gegeben für 12^h Sternzeit des Meridians von Greenwich:

1) Auf S. 237* im Intervall von 10 Sterntagen.

Diese Tafel soll zur Berechnung von Sternephemeriden für die Epochen der Meridiandurchgänge dienen. Wegen ihrer logarithmischen Form und des großen Intervalls ist die Tafel zur Interpolation nicht geeignet. Man wird deshalb zweckmäßig die Interpolation erst nach der Summierung der einzelnen unmittelbar für die Epochen der Tafel berechneten Glieder vornehmen.

2) Auf S. 256*—264* für jeden Sterntag. Hier sind die numerischen Werte von A, B, C und D mit ihren Differenzen gegeben und die kurzperiodischen Mondglieder A' und B' mit angeführt.

Beiden Tafeln ist in einer Spalte die dem festen Sternzeitmoment jedesmal entsprechende Welt-Zeit vorangestellt; man wird hiernach auf jeden beliebigen Zeitpunkt, gegeben durch Datum, Sternzeit und Längendifferenz gegen Greenwich, übergehen können. Eine weitere Spalte gibt die seit Beginn des annus fictus verflossene Zeit in Bruchteilen des tropischen Jahres.

Die Reduktionsgrößen der *zweiten* Form: f, log g, G, log h, H, log i und i, sowie f', g' und G' sind S. 238*—255* von Tag zu Tag für 0^h Welt-Zeit gegeben.

Auch hier findet sich eine Spalte, t überschrieben, welche die seit Beginn des annus fictus verflossene Zeit in Bruchteilen des tropischen Jahres gibt. Ferner ist die Sternzeit Greenwich für 0^h Welt-Zeit gegeben.

Die Seiten mit ungerader Seitenzahl enthalten außer den schon erwähnten f', g', G' noch folgende Größen:

a) ψ = Allgemeine Präzession seit Jahresanfang.
b) $\Delta\psi$ = Langperiodische Glieder der Nutation in Länge.
c) $\Delta\psi'$ = Kurzperiodische Glieder der Nutation in Länge.
d) ε = Wahre Schiefe der Ekliptik.
e) $\Delta\varepsilon$ = Langperiodische Glieder der Nutation in Schiefe.
f) $\Delta\varepsilon'$ = Kurzperiodische Glieder der Nutation in Schiefe.
g) Die Koeffizienten j und k, welche in den Formeln auf S. 267* vorkommen.

Die mittlere Schiefe erhält man durch Subtraktion der Gesamtnutation ($\Delta\varepsilon + \Delta\varepsilon'$) von der wahren Schiefe.

Auf S. 265* findet sich eine Tafel der Hilfsgrößen zur Berechnung der Präzession von verschiedenen mittleren Äquinoktien bis 1933.0.

S. 266* enthält eine Tafel der Hilfsgrößen zur Übertragung der Polsternörter von verschiedenen mittleren Äquinoktien auf das mittlere Äquinoktium 1933.0.

Auf S. 267* sind die Formeln zusammengestellt, mit welchen bei Anschlußbeobachtungen die gemessenen Koordinatendifferenzen der scheinbaren Örter in solche der mittleren Örter für den Jahresanfang übergeführt werden. Die in diesen Formeln auftretenden Koeffizienten j und k sind auf den Seiten 239*—255* enthalten und haben die Bedeutung

$$j = 15\,g \text{ arc } 1'$$
$$k = 15\,h \text{ arc } 1',$$

wobei g und h die auf den Seiten 238*—254* gegebenen Reduktionsgrößen sind.

S. 268* enthält eine Zusammenstellung der von der Deklination abhängenden Faktoren der Formeln auf S. 267*.

S. 269* enthält eine Tafel der numerischen Werte der Funktionen Sinus und Cosinus für in Zeit ausgedrückte Winkel. Ihre Benutzung erleichtert die Berechnung der Formeln auf S. 267*.

Die Seite 270* enthält eine Tafel zur Übertragung von Rektaszensions- und Deklinationsdifferenzen vom mittleren Äquinoktium 1933.0 auf das Normaläquinoktium 1925.0. Man findet die auf das Normaläquinoktium 1925.0 bezogene Koordinatendifferenz, indem man an die auf das mittlere Äquinoktium 1933.0 bezogene Rektaszensionsdifferenz die differentielle Präzession Δp_α^s und an die Deklinationsdifferenz die differentielle Präzession $\Delta p_\delta''$ anbringt:

$$\Delta p_\alpha^s = a_1 \operatorname{tg}\delta \cdot \Delta\alpha^m + a_2 \frac{1}{15} \sec^2\delta \cdot \Delta\delta',$$
$$\Delta p_\delta'' = d_1 \cdot \Delta\alpha^m.$$

Die Koeffizienten a_1, a_2 und d_1 sind in der Tafel auf S. 270* enthalten und haben die Bedeutung

$$a_1 = (n) \text{ arc } 1' \cos\alpha$$
$$a_2 = (n) \text{ arc } 1' \sin\alpha$$
$$d_1 = -15\,(n) \text{ arc } 1' \sin\alpha.$$

$\Delta\alpha^m$ und $\Delta\delta'$ sind die auf das mittlere Äquinoktium 1933.0 bezogenen Rektaszensions- und Deklinationsdifferenzen in Zeit- bez. Bogenminuten. Nach den angegebenen Formeln findet man die differentielle Präzession für Rektaszension in Zeitsekunden, diejenige für Deklination in Bogensekunden.

Die auf den Seiten 271*—272* gegebenen Größen f, log g und G dienen zur Übertragung der Örter von dem *mittleren* Normaläquinoktium 1925.0 auf das jedesmalige *wahre* Äquinoktium. Die Berücksichtigung des Einflusses der Variatio saecularis bei dieser Übertragung ist durch die Tafel auf S. 273* gegeben. Diese enthält in der ersten Reihe einer jeden Vertikalspalte die Werte von 0.32 × Var. saec. für die mit den Argumenten α und δ gegebenen Örter. Die an zweiter Stelle stehenden Zahlen einer jeden Vertikalspalte sind die einjährigen Änderungen von 0.32 × Var. saec. und sind, wenn erforderlich, bei der Entnahme des Einflusses der Variatio saecularis für den in Frage kommenden Bruchteil des Jahres zu berücksichtigen.

Eine Tafel zur Übertragung von Sternörtern vom mittleren Äqui-

noktium 1933.0 auf das Normaläquinoktium 1925.0 befindet sich auf den Seiten 274*—276*.

Die hier tabulierten Größen sind gerechnet nach den Formeln:

$$A = (m) + \frac{\nu^2}{4} \sin 2a$$
$$A_1 = \nu \sin a$$
$$A_2 = \frac{\nu^2}{2} \sin 2a$$
$$D = \nu \cos a$$
$$D_1 = -\frac{\nu^2}{2} \sin^2 a,$$

wobei $\nu = \sin(n)$, $a = \alpha_{1933.0} + 90° - (N)$. Betreffs der Größen (m), (n) und $90° - (N)$ vgl. S. 266*.

Sonnenfinsternisse (S. 278*—283*).

Die bei den Sonnenfinsternissen gegebenen Besselschen Elemente dienen in der folgenden Weise zur Vorausberechnung der Phasenzeiten und der Positionswinkel der Kontakte:

Mit einer Ausgangszeit T (siehe weiter unten) entnimmt man der Elemententabelle die Werte:

x, y, log sin d, log cos d, μ, l ($l^{(a)}$ für äußere, $l^{(i)}$ für innere Berührung), log tang f ($f^{(a)}$ für äußere, $f^{(i)}$ für innere Berührung), x' und y'.

Mit ihnen rechnet man das folgende Formelsystem durch:

$$(1)\left\{\begin{aligned} \xi &= c \cos\varphi \sin(\mu-\lambda) \\ \eta &= s \sin\varphi \cos d - c \cos\varphi \sin d \cos(\mu-\lambda) \\ \zeta &= s \sin\varphi \sin d + c \cos\varphi \cos d \cos(\mu-\lambda) \\ \xi' &= [7.6398-10]\, c \cos\varphi \cos(\mu-\lambda) \\ \eta' &= [7.6398-10]\, \xi \sin d, \end{aligned}\right.$$

worin φ die geographische Breite, λ die westliche Länge (von Greenwich) des Beobachtungsortes bezeichnen, s und c aus der Tafel auf S. 352* zu entnehmen sind.

Alsdann:

$$(2)\left\{\begin{aligned} &\left.\begin{aligned} m \sin M &= x - \xi \\ m \cos M &= y - \eta \end{aligned}\right\} m > 0 \\ &\left.\begin{aligned} n \sin N &= x' - \xi' \\ n \cos N &= y' - \eta' \end{aligned}\right\} n > 0 \end{aligned}\right.$$

Nun berechnet man aus:

$$(3)\quad L = l - \zeta \text{ tang } f$$

$L^{(a)}$ mit $l^{(a)}$ und $f^{(a)}$, $L^{(i)}$ mit $l^{(i)}$ und $f^{(i)}$; dann aus:

$$(4)\quad \sin\psi = \frac{m \sin(M-N)}{L}\ ^{1)}$$

---

1) Wird der Winkel ψ bei der ersten Näherungsrechnung imaginär, so rechne man τ unter der Annahme $\psi = 90°$ aus $\tau = -\frac{m\cos(M-N)}{n}$; bleibt ψ auch in der weiteren Rechnung imaginär, so deutet dies an, daß an dem betreffenden Orte keine Sonnenfinsternis stattfindet.

mit $L^{(a)}$ und $L^{(i)}$ je zwei Werte $\psi^{(a_1)}$, $\psi^{(a_2)}$ und $\psi^{(i_1)}$, $\psi^{(i_2)}$, von denen der eine zum Eintritt der Erde in den Halb- oder Kernschatten-Kegel, der andere zu ihrem Austritt aus ihm gehört. Diesen vier Werten $\psi^{(a_1)}$, $\psi^{(a_2)}$ und $\psi^{(i_1)}$, $\psi^{(i_2)}$ entsprechen vier Werte $\tau^{(a_1)}$, $\tau^{(a_2)}$ und $\tau^{(i_1)}$, $\tau^{(i_2)}$ (in Zeitminuten) nach

$$(5)\quad \tau = -\frac{m \cos (M-N)}{n} + \frac{L \cos \psi}{n},$$

um welche die Ausgangszeit T zu verbessern ist, um die Zeit der gesuchten Phase zu erhalten. Ist T die gesuchte Phasenzeit, so wird $\tau = 0$ werden. Man muß daher das Formelsystem (1) bis (5) mit steigenden Näherungen solange durchrechnen, bis dieser Fall eintritt, d. h. bis das Formelsystem sich schließt. Zu diesem Zweck beginnt man mit einem Näherungswert T_1, für den man, wenn kein besserer bekannt sein sollte, eine beliebige Zeit nahe der Mitte der Finsternis nehmen mag, und rechnet die erste genäherte Korrektion τ_1; dann wiederholt man die Rechnung mit $T_2 = T_1 + \tau_1$, dann mit $T_3 = T_2 + \tau_2 = T_1 + \tau_1 + \tau_2$ usf. bis $\tau_n = 0$ sich ergibt. T_n ist dann die gesuchte Welt-Zeit des Kontaktes, die durch Hinzufügung der Längendifferenz in mittlere Ortszeit zu verwandeln ist. Die Rechnung ist für jede Berührung gesondert durchzuführen.

Die Positionswinkel der einzelnen Phasen, in üblicher Weise vom Punkt größter Deklination nach Osten gezählt, folgen aus den Werten der letzten Näherung (Größen mit dem Index n) nach

$$P = N + \psi.$$

Will man den Winkelabstand Q vom Punkte der größten Höhe haben, so hat man von P noch den parallaktischen Winkel γ abzuziehen, der aus

$$\left.\begin{aligned} p \sin \gamma &= \xi \\ p \cos \gamma &= \eta \end{aligned}\right\} p > 0$$

folgt, also

$$Q = P - \gamma.$$

Um die Zeit der größten Phase, $T_{\max}$, zu erhalten, hat man die beiden Formelsysteme (1) und (2) mit einem Näherungswerte $\overline{T}_1$ durchzurechnen, daraus $\overline{T}_2 = \overline{T}_1 - \frac{m \cos (M-N)}{n}$ zu entnehmen und die Rechnung solange fortzusetzen, bis die Korrektion der Ausgangszeit 0 wird. Als Näherungswert $\overline{T}_1$ wählt man zweckmäßig das Mittel der beiden Werte von T_2 für die Berührungszeiten.

Die Größe der Verfinsterung i, in Teilen des Sonnendurchmessers ausgedrückt, ergibt sich dann aus:

$$i = \frac{L^{(a)} - m}{2\, L^{(a)} - 0.5450}$$

worin $L^{(a)}$ und m die zur Zeit $T_{\max}$ gehörigen Werte bedeuten.

Sternbedeckungen (S. 284*—290*).

Die Seiten 284*—287* enthalten die Elemente von Stern- und Planetenbedeckungen durch den Mond, welche in dem Gebiet zwischen den Meridianen 0^h und 2^h östliche Länge von Greenwich und den Breiten-

kreisen $+45^\circ$ und $+55^\circ$ sichtbar sind. Die Auswahl ist auf Sterne bis zur Größe $6^m.0$ beschränkt.

Mit den in der Zusammenstellung der Elemente gegebenen Werten geschieht die Berechnung der Berührungszeiten eines Sternes mit dem Mondrand für einen Ort mit den geographischen Koordinaten φ und λ (λ positiv, wenn der Beobachtungsort westlich von Greenwich liegt) auf folgende Weise:

Aus der auf den Seiten 284*—287* enthaltenen Welt-Zeit T der geozentrischen Konjunktion von Mond und Stern findet man einen ausreichenden Näherungswert $T + t$ der Welt-Zeit der topozentrischen Konjunktion durch Berechnung der Größen:

$$h_0 = H - \lambda$$

$$\xi_0 = c \cos \varphi \sin h_0 \quad (c \text{ und später } s \text{ aus der Tafel auf S. 352*})$$

$$\xi' = [9.4192 - 10]\ c \cos \varphi \cos \tfrac{4}{3} h_0$$

$$t = \frac{\xi_0}{x' - \xi'}$$

t ergibt sich in Stunden mittlerer Zeit. Das Vorzeichen entspricht dem von h_0.

Für die Zeit $T + t$ berechne man die folgenden Größen, in denen $t_0 = 1.0027\, t$ ist.

$$\xi = c \cos \varphi \sin (h_0 + t_0)$$

$$\eta = s \sin \varphi \cos \delta - c \cos \varphi \sin \delta \cos (h_0 + t_0) = \eta_1 - \eta_2$$

$$\xi' = [9.4192 - 10]\ c \cos \varphi \cos (h_0 + t_0)$$

$$\eta' = [9.4192 - 10]\ \xi \sin \delta$$

$$x = x'\, t$$

$$y = Y + y'\, t.$$

Aus den Beziehungen:

$$\left.\begin{aligned} m \sin M &= x - \xi \\ m \cos M &= y - \eta \end{aligned}\right\}\ m > 0$$

$$\left.\begin{aligned} n \sin N &= x' - \xi' \\ n \cos N &= y' - \eta' \end{aligned}\right\}\ n > 0$$

$$\sin \psi = [0.5646]\ m \sin (M - N),$$

ψ zwischen $+90^\circ$ und -90°, berechne man

$$\tau = -\frac{[1.7782]\, m}{n} \cos (M - N) \mp \frac{[1.2135]}{n} \cos \psi$$

$$d\tau = \frac{[6.7591 - 10]\,\tau^2}{n \cos \psi} [\eta_2 \cos (N \mp \psi) - \xi \sin (N \mp \psi)],$$

wobei die oberen Vorzeichen für den Eintritt, die unteren für den Austritt gelten. Die eingeklammerten Zahlen bedeuten Logarithmen. τ und $d\tau$ ergeben sich in Zeitminuten. Werden die für den Eintritt geltenden Werte mit τ' und $d\tau'$ bezeichnet, die für den Austritt geltenden mit τ'' und $d\tau''$, so ist die Welt-Zeit des

$$\text{Eintritts} = T + t + \tau' + d\tau'$$

$$\text{Austritts} = T + t + \tau'' + d\tau''.$$

Als Kontrolle berechne man die Werte von x, y, ξ, η für die so gefundenen Berührungszeiten. Sind diese richtig, so muß die Beziehung erfüllt sein:

$$\sqrt{(x - \xi)^2 + (y - \eta)^2} = 0.2725.$$

Ist $m \sin(M - N) > 0.2725$, so tritt für den betreffenden Beobachtungsort keine Bedeckung des Sternes ein.

Die Positionswinkel des Sternes in bezug auf den Mondmittelpunkt für die Zeiten des Ein- und Austritts folgen aus

$$P_E = N - \psi - dP \text{ für den Eintritt,}$$
$$P_A = N + \psi + dP \pm 180^\circ \text{ für den Austritt,}$$

wobei die Winkel $N - \psi$ und $N + \psi$ aus der Rechnung für $d\tau$ entnommen werden können, und dP in Graden ausgedrückt aus

$$dP = \frac{[7.3038 - 10]\,\tau^2}{\cos\psi}(\eta_2 \sin N + \xi \cos N)$$

folgt.

Auf den Seiten 288*—290* sind Angaben über die Sternbedeckungen enthalten, die in Berlin-Babelsberg, Königsberg und München sichtbar sind. Außer der genäherten Welt-Zeit des Ein- und Austrittes ist unter P der Positionswinkel des Sterns für die Zeiten der Berührung mit dem Mondrande angeführt.

Die Größen a und b dienen zur Berechnung der genäherten Ein- und Austrittszeiten für andere als die drei angeführten Orte. Sind λ_0 und φ_0 die geographischen Längen und Breiten von Berlin-Babelsberg, Königsberg oder München, λ und φ die Koordinaten irgendeines anderen Ortes innerhalb Deutschlands, so wird für diesen letzteren die Zeit der Berührung des Sterns mit dem Mondrande, wenn man z. B. von den für Berlin-Babelsberg geltenden Angaben ausgeht, gleich der Zeit der Berührung für Berlin-Babelsberg $+ a(\lambda - \lambda_0) + b(\varphi - \varphi_0)$, wobei $\lambda - \lambda_0$ und $\varphi - \varphi_0$ in Einheiten des Grades unter Mitnahme der Zehntelgrade zu verwenden sind, und die Korrektion $a(\lambda - \lambda_0) + b(\varphi - \varphi_0)$ sich in Zeitminuten ergibt.

Die Vorausberechnungen der Sternbedeckungen für Berlin-Babelsberg, Königsberg und München sind von den Herren T. Whitwell und W. A. Forster ausgeführt und von dem Nautical Almanac Office, London, zur Verfügung gestellt worden.

Mondbewegung und Lage des Mondäquators gegen den Erdäquator (S. 291*).

Auf S. 291* finden sich:

- ☊, Aufsteigender Knoten der Mondbahn auf der Ekliptik,
- $L_☾$, Mittlere Länge des Mondes,
- $M_☾$, Mittlere Anomalie des Mondes,
- i, Neigung des Mondäquators gegen den Erdäquator,
- ☊′, Aufsteigender Knoten des Mondäquators auf dem Erdäquator,
- Δ, Stück des Mondäquators zwischen Ekliptik und Erdäquator,

☋, der aufsteigende Knoten des Mondäquators auf der Ekliptik, ist gleich dem absteigenden Knoten der Mondbahn, also

$$☋ = ☊ \pm 180^\circ.$$

Vom Jahrgang 1926 ab sind die Brownschen Mondtafeln verwendet. Die Größen i, Δ und Ω' berechnen sich aus:

$$\sin\frac{1}{2}(\Delta+\Omega')\cos\frac{1}{2}i = \cos\frac{1}{2}(\varepsilon-J)\sin\frac{1}{2}\Omega$$

$$\cos\frac{1}{2}(\Delta+\Omega')\cos\frac{1}{2}i = \cos\frac{1}{2}(\varepsilon+J)\cos\frac{1}{2}\Omega$$

$$\sin\frac{1}{2}(\Delta-\Omega')\sin\frac{1}{2}i = \sin\frac{1}{2}(\varepsilon-J)\sin\frac{1}{2}\Omega$$

$$\cos\frac{1}{2}(\Delta-\Omega')\sin\frac{1}{2}i = \sin\frac{1}{2}(\varepsilon+J)\cos\frac{1}{2}\Omega;$$

dabei ist J, die Neigung des Mondäquators gegen die Ekliptik, nach F. Hayn (Astr. Nachr. Bd. **199**, S. 263) zu $J = 1° 32' 20''$ angenommen worden. Die Zahlen geben die Lage des mittleren Mondäquators (ohne physische Libration).

Die auf S. 291* gemachten Angaben über die Elemente der Mondbahn und des Mondäquators werden, teilweise in Verbindung mit den Größen $L_\odot$ und $M_\odot$ auf S. 29, zu verschiedenen Zwecken verwendet:

1) Als Argumente für die Berechnung der Reduktionsgrößen A, B, C, D, E, A', B'.

2) Bei Bestimmung der selenographischen Koordinaten von Punkten der Mondoberfläche (siehe darüber den folgenden Abschnitt).

3) Bei Berechnung der *optischen* und *physischen* Libration des Mondes.

a) Für die Berechnung der *optischen* Libration des Mondes sind alle nötigen Angaben in den Erläuterungen zu den Hilfstafeln unter Nr. 8 (S. 381*) gemacht.

b) Die Beträge der *physischen* Mondlibration in selenographischer Länge, der Neigung des Mondäquators und seinem aufsteigenden Knoten auf der Ekliptik τ, ρ, σ haben die Werte:

$$\tau = -\ 13''\sin M_☾ + 65''\sin M_\odot + 26''\sin 2(L_☾ - M_☾ - \Omega)$$

$$\rho = -106''\cos M_☾ + 34''\cos(2L_☾ - M_☾ - 2\Omega) - 11''\cos 2(L_☾ - \Omega)$$

$$\sigma\sin J = -108''\sin M_☾ + 34''\sin(2L_☾ - M_☾ - 2\Omega) - 11''\sin 2(L_☾ - \Omega)$$

Diese Zahlenangaben beruhen auf der Annahme $f = 0.73$, worüber F. Hayn (Astr. Nachr. Bd. **199**, S. 264) einzusehen ist.

Ephemeride für den Mondkrater Mösting A.

(S. 292*—296*).

Die Ephemeride des Mondkraters Mösting A. dient zwei verschiedenen Zwecken: erstens zur genauen Bestimmung von Mondörtern am Himmel durch Beobachtung des Kraters, zweitens zur Bestimmung der selenographischen Koordinaten weiterer Punkte der Mondoberfläche durch deren mikrometrischen Anschluß an Mösting A.

Sie gilt für 0^h Welt-Zeit und enthält für die Tage, an welchen Mösting A. innerhalb der Beleuchtungsgrenze liegt, die Unterschiede $\alpha_☾ - \alpha_k$ in Rektaszension und $\delta_☾ - \delta_k$ in Deklination zwischen der Mond-

mitte und dem Krater, vom Erdmittelpunkt aus gesehen, sowie den Logarithmus des Sinus der Äquatorial-Horizontalparallaxe p_k des Kraters, welche von der des Mondes $p_☾$ zu unterscheiden ist, mit den zugehörigen Differenzen.

Zur Anwendung der Ephemeride auf Beobachtungen des Kraters interpoliere man $\alpha_☾ - \alpha_k$, $\delta_☾ - \delta_k$ und log sin p_k mit der Beobachtungszeit. Fügt man alsdann $\alpha_☾ - \alpha_k$ und $\delta_☾ - \delta_k$ zum geozentrischen Ort des Kraters (die Parallaxe wird mit p_k und δ_k, der Deklination des Kraters, berechnet), so hat man die geozentrische Rektaszension und Deklination des Mondes für die Beobachtungszeit.

Hat man einen Punkt der Mondoberfläche mikrometrisch an Mösting A. angeschlossen, so bestimme man zunächst die topozentrischen, d. h. mit Parallaxe behafteten Koordinatendifferenzen $\alpha'_☾ - \alpha'_k$ und $\delta'_☾ - \delta'_k$ zwischen Mondmittelpunkt und Mösting A. aus folgenden Identitäten:

$$\alpha'_☾ - \alpha'_k = \alpha_☾ - \alpha_k + (\alpha'_☾ - \alpha_☾) - (\alpha'_k - \alpha_k)$$
$$\delta'_☾ - \delta'_k = \delta_☾ - \delta_k + (\delta'_☾ - \delta_☾) - (\delta'_k - \delta_k).$$

Verbindet man die so erhaltenen topozentrischen Abstände zwischen der Mondmitte und Mösting A. mit den mikrometrischen Messungen zwischen Mösting A. und einem zweiten Krater, so erhält man die topozentrische Lage des letzteren gegen die Mondmitte und kann hieraus mit Hilfe von $\alpha'_☾$ und $\delta'_☾$ und den Angaben auf S. 291* die selenographische Länge und Breite des zweiten Kraters berechnen. Hierzu dienen die im folgenden angeführten Formeln.

Bezeichnet man mit α' und δ' die topozentrische AR. und Dekl. des an Mösting A. angeschlossenen Kraters, so hat man:

$$s \sin \pi_m = (\alpha' - \alpha'_☾) \cos \tfrac{1}{2} (\delta' + \delta'_☾)$$
$$s \cos \pi_m = \delta' - \delta'_☾$$
$$\pi = \pi_m - \tfrac{1}{2} (\alpha' - \alpha'_☾) \sin \tfrac{1}{2} (\delta' + \delta'_☾)$$
$$\sin (K + s) = \sin s \operatorname{cosec} h'.$$

h' ist der Abstand des Kraters vom Mondschwerpunkt, gesehen vom Beobachtungsort aus, der aus h, dem vom Erdmittelpunkt aus gesehenen Abstand, durch Anbringen der Parallaxe gewonnen wird. Ist die Entfernung des Kraters vom Mondschwerpunkt gänzlich unbekannt, so möge für h der aus Sternbedeckungen folgende Wert des Mondhalbmessers $15' \, 32''.59$ (nach J. Peters, Astr. Nachr. Bd. **138**, S. 147) eingesetzt werden.

$$\sin d = - \sin \delta'_☾ \cos K + \cos \delta'_☾ \sin K \cos \pi$$
$$\cos d \cos (a - \alpha'_☾) = - \cos \delta'_☾ \cos K - \sin \delta'_☾ \sin K \cos \pi$$
$$\cos d \sin (a - \alpha'_☾) = \sin K \sin \pi$$
$$\sin \beta = \sin d \cos i - \cos d \sin i \sin (a - ☊')$$
$$\cos \beta \sin \lambda' = \sin d \sin i + \cos d \cos i \sin (a - ☊')$$
$$\cos \beta \cos \lambda' = \cos d \cos (a - ☊')$$
$$\lambda = \lambda' - 180^\circ - L_☾ - (\Delta - ☋).$$

Die so erhaltenen Werte von λ und β beziehen sich auf den mittleren (vom Einfluß der physischen Libration freien) Mondäquator; die Transformation auf den wahren erfolgt durch die Korrektionen:

$$d\lambda = +13'' \sin M_☾ - 65'' \sin M_\odot - 26'' \sin 2\,(L_☾ - M_☾ - ☊)$$
$$+ \operatorname{tg}\beta\,[-106'' \cos (L_☾ - M_☾ - ☊ + \lambda)$$
$$+ 34'' \cos (L_☾ - M_☾ - ☊ - \lambda) - 11'' \cos (L_☾ - ☊ - \lambda)]$$
$$d\beta = +108'' \sin (L_☾ - M_☾ - ☊ + \lambda) + 34'' \sin (L_☾ - M_☾ - ☊ - \lambda)$$
$$- 11'' \sin (L_☾ - ☊ - \lambda)$$

Bringt man diese Korrektionen $d\lambda$ und $d\beta$ an λ und β an, so erhält man die selenographischen Koordinaten des Kraters:

$$\lambda_0 = \lambda + d\lambda, \qquad \beta_0 = \beta + d\beta$$

Der Berechnung der Ephemeride des Kraters Mösting A. liegen folgende von F. Hayn ermittelten Konstanten (Astr. Nachr. Bd. **199,** S. 263) zugrunde:

$$\lambda_0 = -5^\circ\ 10'\ 7'', \quad \beta_0 = -3^\circ\ 11'\ 2''$$
$$h = 15'\ 33''.4$$

Für die Reduktion auf den mittleren Mondäquator wurden die Werte angenommen:

$$d\lambda = -13'' \sin M_☾ + 65'' \sin M_\odot + 26'' \sin 2\,(L_☾ - M_☾ - ☊)$$
$$d\beta = -108'' \sin (L_☾ - M_☾ - ☊ + \lambda_0) - 34'' \sin (L_☾ - M_☾ - ☊ - \lambda_0)$$
$$+ 11'' \sin (L_☾ - ☊ - \lambda_0),$$

so daß die auf den mittleren Mondäquator bezogenen selenographischen Koordinaten des Kraters Mösting A. sind:

$$\lambda = \lambda_0 + d\lambda, \qquad \beta = \beta_0 + d\beta.$$

Die Formeln zur Berechnung der Ephemeride siehe in den Erläuterungen zum Jahrbuch 1916.

Jupitertrabanten (S. 297*—298*).

Die Seiten 297* und 298* enthalten die Zeitangaben (in Welt-Zeit) für die Verfinsterungen der vier hellen Jupitertrabanten in dem Schattenkegel des Jupiter; Ein- und Austritte sind durch beigefügtes E. und A. unterschieden.

Saturnsring (S. 299*—302*, 315*).

Die Angaben für die scheinbare Größe des Saturn und für die Lage und Größe des Saturnsringes haben die folgende Bedeutung:

α Große Achse des Saturn.

β Kleine Achse des Saturn.

p_a Phase; positiv, wenn der Ostrand, negativ, wenn der Westrand verdunkelt ist.

a Große Achse der Ringellipse.

b Kleine Achse der Ringellipse; positiv, wenn die nördliche, negativ, wenn die südliche Fläche des Ringes sichtbar ist.

U' Heliozentrische Länge des Saturn, gezählt auf der Ringebene vom aufsteigenden Knoten des Ringes in der Ekliptik an.

B' Erhöhungswinkel der Sonne über der Ringebene vom Saturn aus gesehen; nördlich positiv, südlich negativ.

P' Winkel der kleinen Achse der Ringellipse mit dem durch den Saturnsmittelpunkt gehenden Längenkreise; östlich positiv, westlich negativ.

U Geozentrische Länge des Saturn, gezählt auf der Ringebene vom aufsteigenden Knoten des Ringes im Erdäquator an.

B Erhöhungswinkel der Erde über der Ringebene vom Saturn aus gesehen; nördlich positiv, südlich negativ.

P Winkel der kleinen Achse der Ringellipse mit dem durch den Saturnsmittelpunkt gehenden Stundenkreise; östlich positiv, westlich negativ.

N Aufsteigender Knoten der Ringebene im Erdäquator, gezählt vom Äquinoktium an.

J Neigung der Ringebene gegen den Erdäquator.

ω Entfernung der Ekliptik vom Erdäquator, gemessen auf der Ringebene.

Es liegen folgende Bestimmungen nach H. Struve zugrunde:

Durchmesser des Saturn in der Entfernung 9.53887

Äquatorial $17''.47$ Polar $15''.65$

Lage des Saturnsringes gegen die Ekliptik und das Äquinoktium von 1889.25

$\Omega_1 = 167^\circ\ 57'.0$ und $i_1 = 28^\circ\ 5'.6$;

Durchmesser des Ringes in der Entfernung 9.53887

$2\,R = 39''.35$

Saturnstrabanten (S. 303*—326*).

Die Berechnungen über die Saturnstrabanten sind mit den von H. Struve in:

I. Beobachtungen der Saturnstrabanten, 1. Abteilung, 1. Supplementheft zu den »*Observations de Poulkova*«;

II. *Publications de l'Observatoire Central Nicolas*, Série II, Vol. **XI** abgeleiteten, in Astr. Nachr. Bd. **162,** S. 325 u. ff. und von G. Struve in Veröff. Berlin-Babelsberg **VI.** 1 weiter verbesserten Elementen durchgeführt. Für die Halbachsen der 6 inneren Trabanten sind die auf Seite 239 der zweiten Abhandlung mittels der Saturnsmasse $= \frac{1}{3500}$ rechnerisch abgeleiteten Werte angenommen.

Die den Ephemeriden zugrunde liegenden Elemente sind:

MIMAS (II, Seite 195)

Epoche: 1889 April 0.0 Mittl. Zt. Grw.

$$E_0 = 127^\circ\ 19'.0$$
$$n = 381^\circ.9945$$
$$\delta l = -44^\circ.243 \sin(116^\circ.46 + 5^\circ.075\, t) - 0^\circ.75 \sin 3\,(116^\circ.46 + 5^\circ.075\, t)$$
$$l_1 = E_0 + nt_d + \delta l$$
$$\Theta = 54^\circ.7 - 365^\circ.3\, t$$
$$\gamma = 1^\circ\ 36'.5$$
$$\Pi_1 = 107^\circ.2 + 365^\circ.3\, t$$
$$e = 0.0190$$
$$a = 26''.814$$

ENCELADUS (II, Seite 183)

Epoche: 1889 April 0.0 Mittl. Zt. Grw.

$$E_0 = 199^\circ\ 19'.8$$
$$n = 262^\circ.73199$$
$$\delta l = +11'.24 \sin(143^\circ + 92^\circ.4\, t) + 20'.0 \sin(75^\circ + 29^\circ.3\, t)$$
$$l_1 = E_0 + nt_d + \delta l$$
$$\Theta = 328^\circ - 152^\circ.7\, t$$
$$\gamma = 1'.4$$
$$\Pi_1 = 308^\circ.38 + 123^\circ.43\, t$$
$$e = 0.0046$$
$$a = 34''.401$$

TETHYS (II, Seite 195)

Epoche: 1889 April 0.0 Mittl. Zt. Grw.

$$E_0 = 284^\circ\ 31'.0$$
$$n = 190^\circ.69795$$
$$\delta l = +118'.90 \sin(116^\circ.46 + 5^\circ.075\, t) + 2'.02 \sin 3\,(116^\circ.46 + 5^\circ.075\, t)$$
$$l_1 = E_0 + nt_d + \delta l$$
$$\Theta = 110^\circ.55 - 72^\circ.5\, t$$
$$\gamma = 1^\circ\ 4'.36$$
$$e = 0.0000$$
$$a = 42''.586$$

DIONE (II, Seite 183)

Epoche: 1889 April 0.0 Mittl. Zt. Grw.

$$E_0 = 253^\circ\ 51'.4$$
$$n = 131^\circ.534955$$
$$\delta l = -1'.21 \sin(143^\circ + 92^\circ.4\, t) - 2'.13 \sin(75^\circ + 29^\circ.3\, t)$$
$$l_1 = E_0 + nt_d + \delta l$$

$$\Theta = 276^\circ - 31^\circ.0\,t$$
$$\gamma = 4'.0$$
$$\Pi_1 = 165^\circ + 31^\circ.0\,t$$
$$e = 0.0020$$
$$a = 54''.543$$

RHEA (G. Struve, Berlin-Bbg. VI, 1, Seite 16)
Epoche: 1889 April 0.0 Mittl. Zt. Grw.

$$E_0 = 358^\circ\ 23'.8$$
$$n = 79^\circ.690087$$
$$E - E_0 = + 4'.95 \sin(343^\circ.4 - 10^\circ.1\,t)$$
$$l = E_0 + nt_d + (E - E_0)$$
$$(\Omega - \Omega_1)\sin i_1 = 20'.74 \sin(343^\circ.36 - 10^\circ.10\,t) - 0'.38 + 1'.00 \sin(48^\circ.5 - 0^\circ.50\,t)$$
$$i - i_1 = 20'.74 \cos(343^\circ.36 - 10^\circ.10\,t) - 2'.79 + 1'.00 \cos(48^\circ.5 - 0^\circ.50\,t)$$
$$\Pi = 276^\circ.25 + 0^\circ.53\,t + 17^\circ.64 \sin[9^\circ.5\,(t - 1879.59)]$$
$$e = 0.00098 + 0.00030 \cos[9^\circ.5\,(t - 1879.59)]$$
$$a = 76''.170$$

Ω_1 und i_1 bezeichnen die Lage des Saturnsringes.

TITAN (II, Seite 172)
Epoche: 1890 Jan. 0.0 Mittl. Zt. Grw.

$$E_0 = 260^\circ\ 25'.1$$
$$n = 22^\circ.577009$$
$$E - E_0 = + 4'.05 \sin(47^\circ.8 - 0^\circ.51\,t)$$
$$l = E_0 + nt_d + (E - E_0)$$
$$\Omega = 167^\circ\ 51'.2 + 35'.84 \sin(47^\circ.8 - 0^\circ.506\,t) + 0'.837\,t$$
$$i = 27^\circ\ 28'.4 + 16'.88 \cos(47^\circ.8 - 0^\circ.506\,t)$$
$$\Pi = 276^\circ\ 15' + 31'.7\,t + 22'.0\,(\sin 2g - \sin 2g_0)$$
$$e = 0.02886 + 0.000186\,(\cos 2g_0 - \cos 2g)$$
$$g = \Pi - \Omega - 4^\circ.5$$
$$g_0 = g \text{ für } t = 0$$
$$a = 176''.578$$

HYPERION (II, Seite 290)
Epoche: 1890 Jan. 0.0 Mittl. Zt. Grw.

$$E_0 = 304^\circ.53$$
$$n = 16^\circ.919983$$
$$\delta l = 9^\circ.16 \sin(200^\circ.5 + 0^\circ.56206\,t_d)$$
$$l = E_0 + nt_d + \delta l$$

Äquinoktium 1890.0 Epoche 1890.0 + t

$$\Omega = 167^\circ 49'.7 + 42'.4 \sin(47^\circ.8 - 0^\circ.50\,t) + 78'.1 \sin(121^\circ.7 - 2^\circ.0\,t)$$
$$i = 27^\circ 20'.8 + 19'.6 \cos(47^\circ.8 - 0^\circ.50\,t) + 36'.2 \cos(121^\circ.7 - 2^\circ.0\,t)$$

$$\text{Epoche und Äquinoktium: } 1888.890 + t$$
$$= 276^\circ.50 - 18^\circ.663\,t + 14^\circ.0 \sin(-0^\circ.84 + 19^\circ.191\,t) - 1^\circ.5 \sin(-1^\circ.68 + 38^\circ.382\,t)$$
$$e = 0.1043 + 0.0230 \cos(-0^\circ.84 + 19^\circ.191\,t) + \delta e$$

Epoche: 1890 Jan. 0.0 Mittl. Zt. Grw.

$$e\delta e = -0.00044 \cos(200^\circ.5 + 0^\circ.56206\,t_d)$$
$$a = 213''.92 + \delta a$$
$$\delta a = -0.00354\,a \cos(200^\circ.5 + 0^\circ.56206\,t_d).$$

JAPETUS (I, Seite 87; II, Seite 139)

Epoche: 1885 Sept. 1.0 Mittl. Zt. Grw.

$E_0 = 75^\circ\ 26'.4$

$n = 4^\circ.537997$

$l = E_0 + n t_d$

$\Omega = 142^\circ\ 12'.4 - 1'.48\,t$

$i = 18^\circ\ 28'.3 - 0'.54\,t$

$\Pi = 354^\circ\ 30' + 7'.9\,t$

$e = 0.02836 + 0.000015\,t$

$a = 514''.59$

Hierin bedeuten:

$l_1,\ l$ = Mittlere Länge in der Bahn
n = Tropische mittlere tägliche Bewegung
δl = Libration
t_d = Anzahl der Tage seit der Anfangsepoche
t = Anzahl der Jahre seit der Anfangsepoche
Θ = Knoten auf dem Saturnsäquator
Ω = Knoten auf der Ekliptik
γ = Neigung der Trabantenbahn gegen den Saturnsäquator
i = Neigung der Trabantenbahn gegen die Ekliptik
$\Pi_1,\ \Pi$ = Perisaturnium
e = Exzentrizität
a = Halbachse der Trabantenbahn in der mittleren Entfernung $(\Delta) = 9.53887$

l_1, Π_1 und Θ werden gezählt vom Äquinoktium aus in der Ekliptik, weiter im Saturnsäquator und dann erst in der Trabantenbahn, l und Π vom Äquinoktium aus in der Ekliptik und weiter in der Trabantenbahn.

Zunächst sind für die sechs inneren Trabanten auf den Seiten 303* bis 311* die Hilfsmittel gegeben, um in bequemer Weise ihre Positionen ableiten zu können. Sieht man hierbei von den Neigungen γ ab, so erhält man die rechtwinkligen Koordinaten x und y des Trabanten in bezug auf ein Achsenkreuz, dessen Anfangspunkt im Mittelpunkt des Saturn gelegen ist, dessen X-Achse parallel der großen Achse des Ringes verläuft, positiv, wenn östlich, negativ, wenn westlich vom Saturn, und dessen positive Y-Achse mit dem durch den Saturnsmittelpunkt gehenden Stundenkreise den Winkel P einschließt, aus den Gleichungen:

$$x = \frac{a\,(\Delta)}{\Delta}\,\frac{1}{1+\zeta}\,\frac{r}{a}\,\sin(u-U)$$
$$y = \frac{a\,(\Delta)}{\Delta}\,\frac{1}{1+\zeta}\,\frac{r}{a}\,\sin B \cos(u-U).$$

$(\Delta) = 9.53887$ bezeichnet den mittleren Wert der Entfernung Sonne—Saturn, Δ ist die Entfernung Erde—Saturn, $u = L + (v - M)$ ist die wahre Länge des Trabanten vom Erdäquator an gezählt. Die Größen L und $(v - M)$ sind auf den Seiten 303*—311* und 312*—313* zu finden. $\log \frac{1}{1+\zeta}$ ist auf Seite 315* enthalten.

Ist genaueste Ortsbestimmung erforderlich, so darf man bei Mimas, Tethys und Rhea die Neigungen gegen den Saturnsäquator, da sie schon merklichere Werte annehmen, nicht mehr vernachlässigen; x und y ergeben sich dann aus:

$$x = \frac{a(\Delta)}{\Delta} \frac{1}{1+\zeta} \frac{r}{a} \sin(u - U)$$

$$y = \frac{a(\Delta)}{\Delta} \frac{1}{1+\zeta} \frac{r}{a} \sin B [\cos(u - U) + \sin\gamma \operatorname{cotg} B \sin(u - \vartheta)].$$

Die Werte von ϑ, der Länge des aufsteigenden Knotens der Trabantenbahn auf dem Saturnsäquator, gezählt vom Schnittpunkte des Saturnsäquators mit dem Erdäquator, finden sich auf Seite 315*; auch ist hier für Rhea γ, weil stärker mit der Zeit veränderlich, in Intervallen von 16 Tagen gegeben.

Will man aus x und y die Rektaszensions- und Deklinationsdifferenzen bestimmen, so dienen dazu die Gleichungen:

$$s \sin(p - P) = x$$

$$s \cos(p - P) = y$$

$$\Delta\alpha = \alpha_{tr} - \alpha_{pl} = \frac{1}{15} s \sin p \sec \delta_{tr}$$

$$\Delta\delta = \delta_{tr} - \delta_{pl} = s \cos p.$$

Auf den Seiten 316*—321* finden sich für die äußeren Trabanten Hyperion und Japetus, außer den Hilfsgrößen U, B und P, die genäherten Rektaszensions- und Deklinationsunterschiede gegen den Saturn in dem Sinne Trabant minus Planet.

Die aus den Angaben des Berliner Jahrbuchs ermittelten Trabantenörter sind auf das mittlere Äquinoktium der Epoche bezogen.

Zum Schluß enthalten die Seiten 322*—326* die Zeitangaben (in Welt-Zeit) für die östlichen Elongationen von Mimas, Enceladus, Tethys, Dione, Rhea, ferner für die östlichen und westlichen Elongationen $(u - U = \pm 90°)$ und für die oberen und unteren Konjunktionen $(u - U = 0°, 180°)$ von Titan, Hyperion und Japetus mit Saturn; diese Zeitangaben für die Elongationen und Konjunktionen sind bereits für Lichtzeit korrigiert, also ohne weiteres mit den Beobachtungen vergleichbar.

Konstellationen (S. 327*—328*).

In der Übersicht der Konstellationen des Jahres 1933 sind die hauptsächlichsten Planeten-Konstellationen gegeneinander und gegen Sonne und Mond, sowie die Angaben der Epochen, zu welchen sich

die Planeten in gewissen Hauptpunkten ihrer Bahn und ihres synodischen Laufes befinden, zusammengestellt. Die Bedeutung der hier verwendeten Zeichen siehe Seite VIII des Vorworts. — Die Konjunktionen der Planeten mit dem Mond und ihre gegenseitigen sind als Konjunktionen in AR. zu verstehen. Die Angaben über Konjunktion und Opposition der Planeten mit der Sonne entsprechen den Zeiten, zu denen der Längenunterschied zwischen Planet und Sonne 0° oder 180° ist.

Hilfstafeln (S. 329*—352*).

Es folgt eine Reihe von häufig gebrauchten Hilfstafeln.

1) Tafeln für Präzessionswerte (S. 329*—331*).

a) Präzession in Rektaszension und Deklination (Seite 329*)

$$p_\alpha = m + \tfrac{1}{15} n \sin\alpha \operatorname{tg}\delta$$
$$p_\delta = n \cos\alpha$$

b) Präzessionswerte m, n, ψ, π, Π und ε, die mittlere Schiefe der Ekliptik (Seite 329*).

Mit diesen Werten berechnet sich die Präzession für die Elemente einer Bahnebene im System der Ekliptik nach:

$$p_\Omega = \psi - \pi \operatorname{cotg} i \sin(\Pi - \Omega)$$
$$p_i = -\pi \cos(\Pi - \Omega)$$
$$p_\omega = \pi \operatorname{cosec} i \sin(\Pi - \Omega)$$

und im System des Äquators nach:

$$p_{\Omega'} = m - n \operatorname{cotg} i' \cos\Omega'$$
$$p_{i'} = -n \sin\Omega'$$
$$p_{\omega'} = n \cos\Omega' \operatorname{cosec} i'$$

c) Präzession in Länge und Breite (Seite 330*—331*).

$$p_\lambda = \psi + \pi \operatorname{tg}\beta \cos(\Pi - \lambda)$$
$$p_\beta = \pi \sin(\Pi - \lambda)$$

Den Tafeln a) und c) liegen die Präzessionswerte für 1925.0 zugrunde. Über die Bedeutung der Bezeichnungen und die Zahlenwerte vergleiche die Erläuterungen zum Jahrbuch für 1916.

2) Hilfstafeln zur Verwandlung von Mittlerer Zeit in Sternzeit (S. 332*, 334*) und von Sternzeit in Mittlere Zeit (S. 333*, 335*).

3) Eine Tafel zur Verwandlung von Stunden, Minuten und Sekunden in Dezimalteile des Tages und umgekehrt (S. 336*—337*).

4) Eine Tafel für die Ermittelung eines Datums in der Julianischen Periode (Seite 338*—342*). Die Tafel besteht aus zwei Teilen: Der erste Teil (S. 338*—339*) gibt in vierjährigen Schaltperioden für die Jahre 0 bis 2000 die Anzahl der am 0. Januar, 12^h Welt-Zeit, seit Anfang der Julianischen Periode verflossenen Tage. Als Ergänzung gibt die Hilfstafel am Fuß der Seite die Anzahl der am 0. jedes Monats, 12^h Welt-Zeit, seit Beginn der Schaltperiode verflossenen Tage. Man gehe bis zum 4. Oktober des Jahres 1582 mit dem Datum des Julia-

nischen, für spätere Jahre mit dem Datum des Gregorianischen Kalenders in die Tafel ein. Der zweite Teil (S. 340*—342*) gibt für die Jahre 1860—1979 unmittelbar die Anzahl der im Gregorianischen Kalender am 0. eines jeden Monats, 12^h Welt-Zeit, seit Beginn der Julianischen Periode verflossenen Tage.

5) Eine Tafel zur Verwandlung von Minuten und Sekunden in Dezimalteile des Grades und umgekehrt (S. 343*).

6) Tafel des halben Tagbogens (S. 344*—345*), berechnet mit der Horizontalrefraktion $34'.9$ für geographische Breiten von $+30°$ bis $+60°$ und Deklinationen von $-30°$ bis $+30°$.

7) Reduktionstafeln für die Auf- und Untergangszeiten der Sonne und des Mondes (S. 346*—349*). Sie geben die Reduktion der für $+50°$ Breite gültigen Zeiten, wie sie in den Ephemeriden enthalten sind, auf geographische Breiten zwischen $+30°$ und $+60°$ und sind mit der Horizontalrefraktion $34'.9$ für das Erscheinen oder Verschwinden des oberen Gestirnsrandes gerechnet.

8) Die Tafel zur Berechnung der optischen Mondlibration (S. 350*—351*) gibt mit dem Argument $\lambda - \Omega$ die Werte $\Delta\lambda$, a und B entsprechend den Gleichungen:

$$\Delta\lambda = \frac{1}{\operatorname{arc} 1'} \operatorname{tang}^2 \frac{1}{2} J \sin 2 (\lambda - \Omega)$$
$$a = -\cos(\lambda - \Omega) \sin J$$
$$\operatorname{tang} B = -\sin(\lambda - \Omega) \operatorname{tang} J$$

J = Neigung des Mondäquators gegen die Ekliptik.

Ω = Länge des aufsteigenden Knotens der Mondbahn auf der Ekliptik (s. S. 291*).

λ, β = Länge und Breite des Mondmittelpunktes, berechnet für den Beobachtungsort.

Bezeichnen noch $L_☾$ die mittlere Länge des Mondes, l' und b' die optische Libration der Mondmitte in selenographischer Länge und Breite, so ist:

$$l' = \lambda - L_☾ + \Delta\lambda - a(B - \beta)$$
$$b' = B - \beta$$

Der Winkel C, welchen der Mondmeridian des Mittelpunktes der scheinbaren Mondscheibe mit dem Stundenkreise bildet, ergibt sich aus der Gleichung:

$$\sin C = -\sin i \frac{\cos(L_☾ + l' + \Delta - ☋)}{\cos \delta_☾} = -\sin i \frac{\cos(\alpha_☾ - \Omega')}{\cos b'},$$

worin $\alpha_☾$, $\delta_☾$ Rektaszension und Deklination des Mondmittelpunktes, gesehen vom Beobachtungsort aus, bezeichnen; die anderen vorkommenden Größen i, Δ, ☋ und Ω' haben schon auf S. 371* ihre Erklärung gefunden.

9) Eine Tafel der Hilfsgrößen s und c (S. 352*) zur Berechnung der geozentrischen Breite φ' und der geozentrischen Entfernung ρ eines

Erdortes, ausgedrückt in Einheiten der großen Halbachse des Erdellipsoids, aus der geographischen Breite φ nach den Formeln:

$$\varrho \sin \varphi' = s \sin \varphi$$
$$\varrho \cos \varphi' = c \cos \varphi$$

Darin haben s und c die Bedeutung:

$$s = \frac{1 - e^2}{\sqrt{1 - e^2 \sin^2 \varphi}}, \quad c = \frac{1}{\sqrt{1 - e^2 \sin^2 \varphi}}, \quad e = \sqrt{2\,\mathfrak{a} - \mathfrak{a}^2}.$$

Gemäß den Beschlüssen der Pariser Ephemeridenkonferenz von 1911 ist dabei die Abplattung $\mathfrak{a} = \frac{1}{297.0}$ angenommen.

Koordinaten der Sternwarten (S. 353*—359*).

Die Seiten 353*—359* enthalten die geographischen und geozentrischen Koordinaten der Sternwarten.

Die Seehöhen sind in allen Fällen angegeben, wo sie sich einigermaßen sicher ermitteln ließen.

Die geographischen Längen sind auf den Meridian von Greenwich bezogen und dem entsprechend ist die »Korrektion der Sternzeit« die Differenz: Orts-Sternzeit in mittlerer Mitternacht minus Greenwicher Sternzeit in mittlerer Mitternacht.

Die geozentrischen Koordinaten sind den Beschlüssen der Pariser Ephemeridenkonferenz vom Oktober 1911 gemäß unter Annahme der Abplattung 1 : 297.0 berechnet.

Bei Berechnung von log ϱ ist die Seehöhe berücksichtigt.

Normalzeiten der wichtigeren Länder (S. 360*).

Auf S. 360* sind die in den wichtigeren Ländern eingeführten Normalzeiten in zwei Gruppen zusammengestellt, je nachdem sie an den Meridian von Greenwich angeschlossen sind oder einen eigenen Landes-Meridian zugrunde legen.

Berichtigungen.

Jahrbuch 1931, S. 98 Am 3. Juli ist log Δ 0.955 1258 anstatt 0.954 1258.

S. 289* Juni 23, 319 B. Virginis. *P* ist 133° anstatt 47°.

Jahrbuch 1933, S. 7* Stern 233 [36 Camelop.]. Die jährliche Eigenbewegung in Rektaszension ist —5.

S. 69* Stern 281) δ Volantis. Die Deklinationen von Okt. 27 ab sind durch folgende zu ersetzen:

Okt. 17	43.55 ″		Nov. 26	51.25 ″	
27	44.57	102	Dez. 6	54.46	321
Nov. 6	46.23	166	16	57.99	353
16	48.48	225	26	61.74	375
26	51.25	277	36	65.58	384

S. 74* Stern 309) γ Argus, Aug. 28. Die Deklination ist 8.40″ anstatt 18.40″.

S. 171* Das Mondglied in Rektaszension am 30. Nov. ist +4.

Alphabetisches Sachregister